

PSYCHOLOGICAL ABSTRACTS

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GENERAL

2113. [Anon.] *Bibliographie der Philosophie und Psychologie*. 1928, 9. Pp. 58. Leipzig: W. Heims, 1928.—W. S. Hunter (Clark).

2114. Bentley, M., & others. *Instructions in regard to preparation of manuscript*. *Psychol. Bull.*, 1929, 26, 57-63.—Drawn up at the conference of editors and business managers of anthropological and psychological periodicals held in Washington, D. C., November 30 and December 1, 1928, under the auspices of the National Research Council.—J. F. Dashiell (North Carolina).

2115. Boring, E. G. *The psychology of controversy*. *Psychol. Rev.*, 1929, 36, 97-121.—The scientist is limited by certain paradoxes of human nature and the psychologist shares these limitations with other scientists. One of these is that scientific truth, like juristic truth, must come about by controversy, yet the more one fights for the truth the less he may see it. The controversies of Mesmer and his opponents, Elliotson and his, Wundt and Stumpf, and Titchener and Baldwin go to show that the drive which urges men to laborious research may also keep them from the attainment of the truth they seek. The second paradox is that new movements in psychology, and presumably in thought at large, are mostly negative, so that what claims to be progress is nevertheless an undoing of the progress of the past. The history of a number of movements shows this to be true. The "movement" introduces all the psychological advantages and disadvantages of personal controversy. There are some advantages to the emotional side of scientific pursuits. The scientist hence needs to be a dual personality: he needs to have the drive to prosecute his cause, but must stand off and evaluate himself at times in the impartial manner of a judge. But he must not be the judge too often, lest the productive, prejudiced personality be eliminated and science be the loser.—H. Helson (Bryn Mawr).

2116. Bopp, L. *Von den Schulen der "verstehenden" Psychologie*. (On the schools of the "interpretative" psychology.) *Literarischer Handweiser*, 1928, 65, 241-246.—Presentation and critical analysis.—A. Römer (Leipzig).

2117. Brown, W. *Proceedings of the Western Psychological Association, Stanford University, August 3-4, 1928*. *Psychol. Bull.*, 1929, 26, 1-14.—J. F. Dashiell (North Carolina).

2118. Cattell, J. McK. *Early psychological laboratories*. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ.

Press, 1928. Pp. 427-433.—Also published under same title in *Science*, 1928, 67, 543-548. See II: 2976.—C. Landis (Behavior Research Fund).

2119. de Bermingham, M. T. Thomas William Salmon, M.D.; a bibliography of his writings. *Ment. Hygiene*, 1928, 12, 114-118.—90 titles are cited.—G. J. Rich (Bellevue Hospital).

2120. de Gaultier, J. *La sensibilité métaphysique, les logiques et la raison*. (Metaphysical sensibility, logic and reason.) *J. de psychol.*, 1928, 25, 735-744.—The term *metaphysical sensibility* should be introduced into the philosophical vocabulary because such a "Messianic sensibility" must always precede objective experience.—N. L. Munn (Clark).

2121. Dewey, J. *Body and mind*. *Ment. Hygiene*, 1928, 12, 1-17.—The traditional division of mind and body has resulted from the separation of science and philosophy. It has its roots in the habit of regarding the mental and the physical as substances or processes, instead of as functions or qualities of action. When the standpoint of action is taken, the essential unity of conduct is apparent. Action is to be considered as an integrated whole. Within the unity of behavior body stands for the means and agencies of conduct, and mind for its incorporated fruits and consequences. In dealing with human behavior a longitudinal rather than a cross-sectional view is necessary. A human being carries his past in his habits and habitations, and the latter can be understood only in the light of the history that is included in them. The reduction of mental phenomena to the stimulus-response type is valueless because it omits consideration of how an object or a situation becomes a stimulus.—G. J. Rich (Bellevue Hospital).

2122. Dewey, J. *Experience and nature*. New York: Norton, 1929.—W. S. Hunter (Clark).

2123. Fernberger, S. W. *Proceedings of the thirty-seventh annual meeting of the American Psychological Association, Inc., New York, December 27-29, 1928*. *Psychol. Bull.*, 1929, 26, 121-184.—J. F. Dashiell (North Carolina).

2124. Grant, M. E. "Mysterious" tropisms: an illustration of the *Gestalt* law of precision. *J. Educ. Psychol.*, 1929, 20, 125-127.—Students' misunderstandings of the word "stereotyped" in the lecture statement, "a tropism is a stereotyped form of behavior" are offered as illustrations of the *Gestalt* law of precision. The students attempted to put the statement in familiar terms and therefore in a more stable and simple form.—J. A. McGeoch (Arkansas).

2125. Han, Y.-S. Some tendencies of contemporary Chinese philosophy. *J. Phil.*, 1928, 25, 505-513.—After a short account of the history of Chinese thought, Han describes the recent influence of Western thought. Dewey and Russell have been especially influential. Then he classifies contemporary Chinese thinkers into the usual divisions, pragmatic, naturalistic, idealistic, and realistic.—A. P. Brogan (Texas).

2126. Hardy, A. C. A recording photo-electric color analyzer. *J. Opt. Soc. Amer.*, 1929, 18, 96-117.—This instrument is a spectro-photometer adapted for the measurement both of the spectral transmission of transparent substances and of the spectral reflectance of surfaces. Since these data are necessary and, with specification of the illumination, sufficient for specifying filters and surfaces as color stimuli, the name "color analyzer" is amply justified. The comparison of the absorbed with the unabsorbed beam of homogeneous light is accomplished with the photo-electric cell by the "null" method. The amplified photo-electric current controls the opening of a shutter affecting the unabsorbed beam so that its intensity is quickly made equal to that of the absorbed beam. The opening of this shutter is, of course, proportional to the spectral transmission (or spectral reflectance as the case may be) of the sample; the size of the opening is automatically recorded for each wave length. In this way, it is stated, a complete spectro-photometric curve for the entire visible spectrum is traced in approximately thirty seconds. "The precision has been found more than adequate for all colorimetric purposes." The color analyzer may be used with an integrating device which performs mechanically the greater part of the computation necessary for expressing the results of a color analysis in simple colorimetric terms, such as: brightness for a specified illumination and trilinear coordinates referred to the O. S. A. "excitation" functions.—D. B. Judd (Bureau of Standards).

2127. Herrick, C. J. Behavior and mechanism. *Soc. Forces*, 1928, 7, 1-11.—There are differences between the various kinds of natural mechanisms and the things that they do. Subjective experience is one of the modes of operation of a very special kind of mechanism. The facts of experience show that conscious life and physiological life operate in unison and in causal interrelationship. In enlarging the conception of mechanism to embrace the whole of the human body and all of its operations, including the conscious acts, lies the only practicable scientific basis for a comprehensive study of human conduct.—L. W. Gellermann (Clark).

2128. Jastrow, J. Lo, the psychologist! In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 434-438.—A description of the ways and aims of present-day psychology and psychologists.—C. Landis (Behavior Research Fund).

2129. Kent, J. B. The status of the data of experience. *J. Phil.*, 1928, 25, 617-627.—The only logical solution of the ontological relation between the datum and objective reality is to give to each a

nature which is consistent with its function in experience, without giving it the status belonging to the other. The datum must be a given existence which has no objective existence. The objective world must have an independent self-existence which cannot be given in consciousness.—A. P. Brogan (Texas).

2130. Köhler, W. *Gestalt psychology*. New York: Liveright, 1929. Pp. xi + 403. \$4.00.—*Gestalt psychology* resembles "a promising start more than a complete achievement." Köhler has attempted to systematize the concepts of *Gestalt* as they relate to behavioristic theory, structuralism, sensory organization, behavior, association, reproduction, insight, etc. Behaviorism is regarded as a "one-sided and impractical purism" which, by over-simplification, ignores the context from which it has been taken. Psychology is a young science and must develop as other sciences have developed. Behaviorism has prematurely attempted to wield the instruments of the physical scientist and in doing so has neglected much valuable data. Behaviorists "shy away not only from introspection but also from all things once connected with it, and primarily from language, though it in itself is utterly innocent." "A decisive motive in introspectionism is the belief that true sensations are independent of subjective attitude and depend only upon local stimulation as purely local experiences." Both the behaviorist and the introspectionist neglect to examine "their common convictions as to the basic type of nerve process underlying experience or behavior." Both are tied down to a "machine theory" which assumes a rigidly determined point-to-point correlation between stimulus and response. The *Gestalt* concept is that "not only movement, or process as such, but also the direction and distribution of process is determined dynamically by interaction." Events of this type are excluded from standard psychological and neurological theory—"Gestalt psychology asks to know the ground for its exclusion and defiantly proposes to give this type of process a fundamental rôle in psychological theory." Sensory organization is not dependent upon isolated stimuli and local stimulation, but upon the relative properties of stimulation and the dynamical context. Experience is not a mosaic of isolated sensations but exists as a functional whole. One chapter is concerned with the properties of functional wholes. These are considered as dynamically determined and dependent upon the relative properties of the stimulus. In association previous organization determines the properties of actual experience. "We may talk about an association . . . if we keep in mind that even here it is the concept of organization which remains decisive functionally." A more complete statement of the concept of direct dynamical determination comes in the final chapter concerning insight: "Each phase of what happens grows out of its predecessors, depending upon their concrete nature. And the subject, whose experiences are an expression of this one developing context in the brain-field, will experience the development, along with its 'referring to,' 'depending upon,' 'away from' and so forth—that

is, with insight." The general hypothesis underlying the author's assumptions is that "the concrete order of actual experience is a true representation of the dynamic order of corresponding physiological processes. Therefore, if, to me, my language is an adequate 'symbol' for my direct experience, it is an objective symbol for those physiological processes at the same time." Bibliography.—N. L. Munn (Clark).

2131. Lillie, R. S. *The scientific view of life.* *J. Phil.*, 1928, 25, 589-606.—How far are vital phenomena amenable to scientific treatment? To answer this question we must determine the nature and applicability of scientific method in general. On the assumption of realism, we may say that our mental representations or concepts of nature may be made a true, if partial, picture of the external actuality as it exists and acts independently of being known. What makes science possible is the observed presence of order, repetition, and interconnection in our experience. Since nature is repetitive, it is also classifiable and measurable. In the whole phenomenon there may be some property not representable merely as the sum of its parts. But we make a model which simplifies and gives us a valid schematization. This model involves merely a quantitative correspondence to the objective reality described. What the measured thing is in its inner nature is not considered in this procedure. The biological sequence, while vastly more complex, resembles the physical sequence in its constancy and determinability. But no science can portray reality in its completeness or give the inner reality or individuality of any differentiated part of nature. Description means specification by concepts, and the total reality of a thing cannot be represented by concepts. To conceptualize is to abstract from individuality. In the case of many living beings, especially human beings, the class characters become of subordinate interest, and the characters of the individuals assume primary importance. The individual as such is not the subject of science.—A. P. Brogan (Texas).

2132. MacCurdy, J. T. *Common principles in psychology and physiology.* New York: Macmillan, 1928. Cambridge, England: University Press, 1928. Pp. vii + 284. \$6.00.—The author sets out "to penetrate and, if possible, to destroy the bulkhead which has appeared between psychology and physiology." This he proposes to do by means of his "pattern" theory, which applies equally well to physiological and psychological phenomena. The patterns, which are "immaterial agencies" are assumed to "guide, and in that sense control, the physico-chemical processes involved in all living." The activity of these agencies is likened to that of the navigator "who brings a vessel from port to port. . . . The pattern theory is not a spiritistic one that assumes an appearance of energy from an extra-material sphere, but merely claims that exhibitions of energy in the biological field may be given their direction by agencies not subject to physico-chemical laws." In his *Psychology of Emotion, Morbid and Normal*, MacCurdy was led to the general conclusion that "the basis of mental life is an uncon-

scious flux of images; when these enter consciousness, becoming subjective data, they are the fundamental elements of which 'thoughts' are composed; on the other hand, they initiate and control many physiological processes of both voluntary and involuntary systems." In this study he elucidates and develops this conclusion, which brings him to the formulation of laws of patterns as exhibited in the mental field and in the physiological field. Under the former he deals with images, the construction of primitive mental patterns, the primary function of consciousness, the evolution of intelligence, appetite and interest, attention, perception, meaning, recognition, voluntary recall and a summary chapter on laws of patterns as deduced from psychology. In Part II, which deals with physiological patterns, these subjects are treated: the functions of the nervous system, imaginal processes, mechanistic explanations, anatomical designs, spinal shock, inhibition, the effects of strychnine on the central nervous system, biological patterns (preformism and epigenesis, the evolution of specialized tissue, imaginal processes), growth patterns, the development of the nervous system, and a summary of physiological patterns.—L. M. Harden (Clark).

2133. Metfessel, M. *Recording by perforating.* *Science*, 1929, 69, 382-383.—A pin attached to the prong of a tuning fork, or to the end of an electric vibrator, which perforates a moving strip of adding-machine paper furnishes a method of recording temporal relations with fewer adjustments than do methods of writing.—G. J. Rich (Bellevue Hospital).

2134. Mieses, M. *Psychologische Rudimente.* (Psychological rudiments.) Berlin-Wien: B. Harz, 1928. Pp. 202. M. 3-5.—The author asserts that not only in biology but also in the sphere of mental activity there are phenomena which had previously been useful on other developmental levels, and which continued even after the disappearance of the circumstances which occasioned their formation. He shows that many individual activities, evaluations and habits cannot be understood by a study of logical contemporaneous motives but must be considered from the point of view of the unconscious as the result of past experiences. The author does not confine his observations to man since the soul of animals shows a similar aspect. He then shifts from individual to mass psychology and proves that past ideas and events determine the expressions, institutions, language, customs, beliefs and literature of whole masses of people. He shows that we must search for the share of the unconscious influence of past causes and reasons in all expressions of culture, politics, economics, the state and religion in order to obtain a correct understanding of man's history in every relation. The last section of the book develops, from a theory of the psychology of rudiments which the author has himself constructed, new ideas on the fate of certain cultures, the irrational element in all cultures and the consequences of the differences in racial psychology.—M. Mieses (Przemysl in Tolen).

2135. Myers, C. S. Obituary notice: Henry Rutgers Marshall. *Brit. J. Psychol.*, 1928, 18, 359-361.—R. R. Willoughby (Clark).

2136. Politzer, C. [Ed.] *Revue de psychologie concrète. Publication internationale pour recherches de psychologie positive. Volume 1, No. 1, 1929.*—This new journal will appear quarterly. The price per year is 60 francs in France, and for foreign subscriptions a "tarif faible" of 70 francs, and a "tarif fort" of 80 francs. The first number contains: I. Editorial, II. Études documentaires, III. Problèmes permanents, IV. Présentations et analyses critiques.—R. R. Willoughby (Clark).

2137. Pratt, C. C. Faculty psychology. Theoretical studies from the Harvard Psychological Laboratory. *Psychol. Rev.*, 1929, 36, 142-171.—The author gives the criticisms that have been levelled against so-called faculty psychologies and at the same time criticizes the existential point of view from which much of the criticism of faculty psychology has come. Explanation is held as scientifically valid if understood in the sense of fruitful hypotheses and theories serving to furnish the unobserved items in significantly correlated events. Faculties in the sense of mental capacities distributed along quantitative continua and revealed phenomenologically as act-qualities are of the utmost importance for any psychology which does not restrict itself to sensory existentialism. The author believes that a methodical program of scientific inquiry into the principles of human faculty is offered in the hypotheses and technique developed by Spearman for the study of cognition.—H. Helson (Bryn Mawr).

2138. Prinzhorn, H. Les courants principaux de la psychologie allemande contemporaine. (The principal currents of contemporary German psychology.) *J. de psychol.*, 1928, 25, 828-848.—Leaving aside the special fields of contemporary psychology, the author finds five principal trends in modern German psychology. These are: the psychology of structure, psychological phenomenology, psychoanalysis, characterology, and the psychology of constitutions and expressions. The first trend, concerned with the avoidance of artificial isolation of facts, is chiefly represented by Dilthey, Spranger, Wertheimer, Köhler, Koffka, and Krüger. The second, whose chief representative is Husserl, is concerned with a critical evaluation of methods. The third trend is considered as due to the work of Freud and Adler, Jung receiving no mention. This movement constructs a "theory of man on the unique idea of the action of instinct (libido) and of its transformations by repression and sublimation." The fourth tendency, principally represented by Stern, is concerned with a study of the psychology of personality. The fifth trend found by the author considers man as the fatal product of innumerable factors, a corporeal and spiritual unity the exact elements of which are never exactly calculable. This concept, which goes back to Goethe and Nietzsche, is today represented by Klages. The author expresses surprise that the influence of Wundt has disappeared so rapidly. Neither his methods, his problems, his solutions, or

his doctrines have survived to the present day. Nothing survives "but his institute and his pupils who remain attached to his venerable personality and who bring under the shadow of his name their own work, of which, however, the orientation is really different."—N. L. Munn (Clark).

2139. Slosson, E. E. Chemistry and psychology. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 439-446.—The interrelation between chemistry and psychology is discussed and many examples given.—C. Landis (Behavior Research Fund).

2140. Stern, E. Irrtümer in der Betrachtung des Psychischen. (Errors in the consideration of the psychical.) *Päd. Rundschau*, 1929, 5, 110-115.—A. Römer (Leipzig).

2141. Stone, C. P. A multiple discrimination box and its use in studying the learning ability of rats. I. Reliability of scores. *J. Genet. Psychol.*, 1928, 35, 557-573.—A visual discrimination box of five successive units is described in detail. Coefficients of reliability of error scores obtained with white rats, computed with reference to segment versus segment of the series of trials, and odd versus even trials, indicate sufficiently high reliability for comparative purposes. The apparatus has several advantages: it allows of employment of distinct types of motivation; it is useful for comparative studies of different animal species, for studies of interference and transference, for retention and for overlearning, etc.—J. F. Dashiell (North Carolina).

[See also abstracts 2210, 2229, 2301, 2386.]

SENSATION AND PERCEPTION

2142. Bourdon, B. Dispositif pour la démonstration des conditions de la localisation auditive médiane et latérale. (A set-up for the demonstration of the conditions of median and lateral auditory localization.) *Année psychol.*, 1926, 27, 203-206.—Three influences are accepted today as determining auditory localization. The sound is localized on the side where the ear receives the louder sound, receives the stimulation first, and where the sound is in advance as a phase. The apparatus used for testing the first two influences consist of a metal disc, with two rods on the diameter and extending beyond the disc on each side, attached to an electrical motor and rheostat. Two equal short metal rods on adjustable stands lead by means of equal rubber tubes to the subject's ears. When the disc is rotated at a sufficient speed, air waves perceived as a noise are conveyed to the subject. When the rods are placed at equal distances from the base of the stand and from the disc and on a level with the center of the disc, the rotation of the disc gives a sound of equal intensity to both ears and is localized in the median plane of the head. If one stand is placed farther from the disc than the other, the sound is localized on the opposite side. By raising or lowering the rod on either stand, the time at which the stimulus is received by the two ears is different, and the sound will be localized on the side which received the first stimulation. If the apparatus is changed so that there are eight instead

of two rods on the disc and the rate of rotation is increased, a musical tone is produced. By moving the stands or the rods on the stands the same results are produced as for the previously mentioned experiments. The author concludes, therefore, that phase adds nothing new.—*M. B. Mitchell* (Radeliffe).

2143. **Bücklers, M.** *Experimentelle und histologische Untersuchungen über den Einfluss von hochkonzentriertem Ultraviolett auf das Kaninchenauge.* (Experimental and histological researches on the influence of highly concentrated ultra-violet on the eye of the rabbit.) *Graefes Arch. f. Ophth.*, 1928, 121, 73-86.—When all the wave lengths emitted by a Bach mercury vapor lamp are allowed to act on the eye in highly concentrated form, they produce severe destructive effects on the anterior portion of the eye. In order to determine whether this action is to be attributed to the ultra-violet or to the infra-red, the author excluded all wave-lengths but the ultra-violet from 400 to 285 μ , by means of filters. The injury which was then produced was only transitory and superficial. This result bears out the findings of Vogt and other experimenters at the Zurich eye-clinic. They find that the long-wave ultra-violet (wave-length greater than 314 μ ; present in sunlight at ordinary altitudes) has no harmful effect on the eye, but that the infra-red is highly injurious. 4 references.—*D. McL. Purdy* (California).

2144. **Cords, R.** *Bewegungsnachbild und optokinetisches Augenrücken.* (The after-image of movement and optokinetic nystagmus.) *Graefes Arch. f. Ophth.*, 1928, 121, 163-165.—Leiri's theory of the after-image of movement (see II: 2388) explains this phenomenon in terms of after-nystagmus. This theory is untenable for the following reasons. The after-image is a purely local process; it is confined to the region in which movement has been seen. Its dependence on the breadth of the stripes in the stimulus field and on the speed of the stimulus is quite different from that of optokinetic nystagmus. The after-image varies with retinal locality. Its speed decreases when contours and contrasts are eliminated, and when the duration of observation is shortened; optokinetic nystagmus is not affected by these factors. Cords (*Klin. Monatsbl. f. Augenheilk.*, 1926) has put forward the theory that optokinetic after-nystagmus is a consequence of the after-image of movement. 11 references.—*D. McL. Purdy* (California).

2145. **Farid, N.** *A case of right homonymous hemianopia.* *Brit. J. Ophth.*, 1929, 13, 67-68.—A report of a case of partial blindness, in which vision was lost in the right half of each retinal field. This was thought to be due to venous hemorrhage into the ascending visual tracts back of the optic chiasma, and the treatment, which resulted in recovery, consisted in the use of iodides and strychnine, and the cessation of smoking and coffee.—*D. L. Bidwell* (Ohio State).

2146. **Frank, H.** *Untersuchung über Sehgrössenkonstanz bei Kindern.* (Investigation of the constancy of visual size in children.) *Psychol. Forsch.*,

1925, 7, 137-145.—Children between the ages of one to seven years perceive objects as remaining the same apparent size despite a variation of visual angle. The experimental demonstration consisted in having 23 children learn that a reward was to be found beneath the larger of two boxes set side by side; no mention was made to them of size. Afterward the larger box which they had learned to choose was placed at various distances beyond the smaller; in the limiting cases the larger box subtended a visual angle of the retina which was but 1% of the visual angle of the nearer, smaller box. At all ages there was almost no error in recognition of the objectively larger box; the youngest children were as accurate as the older.—*W. S. Hulin* (Princeton).

2147. **Frank, H.** *Diskussion. Die Sehgrössenkonstanz bei Kindern.* (Discussion. The constancy of visual size in children.) *Psychol. Forsch.*, 1927, 10, 102-106.—Frank argues that the constancy of apparent visual size is just as well developed in the two-year-old child as in the ten-year-old, and that Beryl has not taken a sufficiently simple experimental situation by which to justify his conclusion that there is a greater development of this judged constancy with the increase of the child's age.—*W. S. Hulin* (Princeton).

2148. **Gibson, J. J.** *The reproduction of visually perceived forms.* *J. Exper. Psychol.*, 1928, 12, 1-39.—In this investigation the author undertook to study the variations in the reproduction of geometrical patterns shown tachistoscopically to his observers, and to relate the difference to the observers' reports upon the nature of the perception. The types of changes are compared with those reported by Wulf in a previous investigation of the changes in memory images which occur with a lapse of time. (*Psychol. Forsch.*, 1922, 1, 333 ff.) Two series of simple geometrical figures were used as the material, the one series consisting of 14 figures made up of straight lines, and the other, 14 figures made up of curved lines, including 4 figures that involved both straight-line and curved-line components. The figures in the maximal dimension were about 7/8 inch in diameter and were exposed to the subjects by a modified Ranschburg memory apparatus. The period of exposure was approximately 1½ seconds. No definite time limit was set for reproduction. Six observers participated in the experiment, making approximately 4,000 reproductions of the 28 figures. An analysis of the types of changes introduced by the observer in the reproductions of the figures showed trends in the direction of making them similar to objects frequently associated with the figures in previous perceptions. Also changes were often found to be conditioned by cues furnished from a verbal analysis made during the perception of the form. Closure, or perceptual filling, and analysis, or falling apart into separate units, were characteristics likewise. Curved lines are much more apt to be reproduced as straight lines than the reverse. The changes observed in these experiments have not been interpreted as evidence for a single law determining the changes of configurations, but rather as evidence for the existence of perceptual habits which

have arisen in the individual during experience. In general, the nature of a change found in the reproduction depends upon the manner in which the figure was apprehended.—*S. Renshaw* (Ohio State).

2149. Goldschmidt, R. H. *Postulat der Farbwandelspiele*. (A postulate for the play of color change.) Heidelberg: Carl Winter, 1928. Pp. 93. M. 4.80. *Sitzungsberichte der Heidelberger Akad. d. Wiss., Phil.-hist. Kl.*—*W. S. Hunter* (Clark).

2150. Gottschaldt, K. *Über den Einfluss der Erfahrung auf die Wahrnehmung von Figuren. II. Vergleichende Untersuchungen über die Wirkung figuraler Einprägung und den Einfluss spezifischer Geschehensverläufe auf die Auffassung optischer Komplexe*. (On the influence of experience on the perception of figures. II. Comparative studies of the effect of figural impression and the influence of specific sequences of events on the comprehension of visual complexes.) *Psychol. Forsch.*, 1929, 12, 1-87.—Previous experience does not by itself "automatically" influence subsequent experiences of a similar sort. The influence of previous experience is dynamic, acting only as a vector in the subsequent course of events. Any given act of comprehension is really an "autochthonous" product of the current situation in which past experience, as such, is not an independently determining factor. These conclusions are demonstrated by the presentation of several series of geometrical figures. In each series the figures contain common elements, for example, in one series there is a simple Y figure, then a second Y in which the tail transects and equals the height of the two arms, forming three prongs, and a third Y in which the two arms are joined by a straight line, forming a deltoid figure with a tail. In this series, even when the simple Y has been initially presented 40 times before the others, the second and third figures are seen as simple configurations and not as a Y with something added. Also, in Rubin's "figure-ground" relation, a negative demonstration is given regarding the figural after-effect.—*W. S. Hulin* (Princeton).

2151. Hausheer, H. *A theory of perception*. *J. Phil.*, 1928, 25, 645-651.—English empiricism and modern psychology strive to destroy the distinction between acts of consciousness and biological sensory functions. Sensations are not simple, they are summations. A sensory process is continuous. But acts of perception come in jerks, from interval to interval. It is only as we come to view perceptual acts and other acts of consciousness as discontinuous, intermittent, instantaneous, that we can differentiate acts of consciousness from biological and physiological processes. There is a radical distinction between an act and a process.—*A. P. Brogan* (Texas).

2152. Hedinger, M. *Der Mariottesche Fleck bei Achsenmyopie*. (The Mariotte spot in axial myopia.) *Graefes Arch. f. Ophth.*, 1928, 121, 126-144.—The blind spot of the uncorrected myopic eye is somewhat nearer to the fixation point than is that of the emmetropic eye. A correcting concave glass shifts the blind spot temporally; this is a prism effect of the temporal half of the glass. The blind

spot of the corrected eye is generally larger than that of the uncorrected eye, principally because the lens reduces the diffusion circles. Bibliography.—*D. McL. Purdy* (California).

2153. Ives, H. E. *Motion pictures in relief*. *J. Opt. Soc. Amer.*, 1929, 18, 118-122.—By a method, previously described, for making parallax panoramagrams, Ives states that is possible, at least theoretically, to obtain motion pictures in relief without the use of special apparatus at the eyes of the observer. The pictures are to be projected as transparencies and are viewed through a vertical grating in front of the screen. The picture seen depends on the azimuth angle of view; hence, as viewed by the two eyes of an observer, the picture may yield depth by disparate images. A discussion is included of the sources of difficulty in the practical realization of satisfactory motion pictures in relief by this method.—*D. B. Judd* (Bureau of Standards).

2154. Katona, G. *Zur Analyse der Helligkeitskonstanz*. (On the analysis of the constancy of brightness.) *Psychol. Forsch.*, 1929, 12, 94-126.—Similar to the constancy of memory colors and the constancy of the apparent magnitude of known objects, the constancy of the apparent brightness of known objects in varied illumination is a product of the judgment of the whole situation. The constancy of the color or brightness of objects indicates that they are but "parts within a greater constellation."—*W. S. Hulin* (Princeton).

2155. Kestenbaum, A., & Eidelberg, L. *Konvergenzreaktion der Pupille und Naheinstellung*. (The convergence reaction of the pupil and the impulse to near vision.) *Graefes Arch. f. Ophth.*, 1928, 121, 166-212.—The authors' experiments indicate that the contraction of the pupil which accompanies near vision is linked with convergence and not with accommodation or with the impulse to regard a near object. It can occur when accommodation and the impulse to near vision are both absent, so long as convergence is present. This contraction is not transitory like the light-reaction of the pupil, but persistent. To every degree of convergence corresponds a definite mean pupillary diameter (under constant conditions of illumination). The writers emphasize that accommodation and convergence are not true reflexes; it is only the "interesting" object that evokes these responses. Accommodation and convergence have a reciprocal relation; either can elicit the other as a concomitant response. The convergence reaction of the pupil is a concomitant response and not a reflex; its neural pathway has no afferent branch. Neither accommodation, convergence nor the pupillary contraction is primarily dependent on the impulse to near vision. 98 references.—*D. McL. Purdy* (California).

2156. Kravkov, S. W., & Paulsen-Baschmakowa, W. A. *Über die kontrasterregende Wirkung der transformierten Farben*. (Concerning the contrast effect of transformed colors.) *Psychol. Forsch.*, 1929, 12, 88-93.—Two gray discs placed before two green backgrounds were monocularly observed through a reducing screen. After the two grays had been

equated, and the two greens equated, the observers were instructed to look away from the apparatus for a moment, during which time one green background was made brighter. When the observers again inspected the discs and backgrounds they were asked to report any change they found in terms of hue, brightness or saturation of the discs. In the 57 trials with 16 observers, 93% of the answers were that no change was evident in the gray discs. This result is contradictory to the usual supposition that color transformation and brightness contrast depend upon the same process.—W. S. Hulin (Princeton).

2157. Leiri, F. Gibt es einen extralenticularen Akkommodationsmechanismus im Auge? (Is there an extralenticular mechanism of accommodation in the eye?) *Graefes Arch. f. Ophth.*, 1928, 121, 213-224.—Leiri's theory of the after-effect of a rotating spiral (see II: 2388) links this phenomenon with the accommodation of the eye. It follows that if the ciliary muscle is paralyzed with atropine the after-effect should not occur; but experiment contradicts this deduction. The theory can still be valid, however, if the eye possesses some mechanism of accommodation other than that of the crystalline lens. Leiri suggest that there may be such a mechanism in the choroid—the blood vessels of this membrane altering their volume and thus causing the retina to move towards or away from the lens. In this way the eye could accommodate simultaneously to objects at different distances. The retinal image would have a distribution in depth corresponding to the depths in the stimulus field. Lenticular accommodation would be chiefly an accessory of axial vision. The author cites anatomical and physiological data in support of this theory. He also believes that it will explain the following phenomena: the power of accommodation possessed by aquatic mammals whose lens is spherical, the existence of a wide range of depths over which distinct vision is simultaneously possible (*Sehtiefe*), the fact that peripheral visual acuity is practically independent of axial accommodation, the Aubert-Förster phenomenon, Helmholtz's "attention" experiment with momentary illumination, the accommodation exhibited by aphakies, the so-called vision in diffusion circles of ametropics, monocular depth vision, the reversible perspective of certain line drawings, and, finally, the rotating-spiral phenomenon. 15 references.—D. McL. Purdy (California).

2158. Mendelsohn, W. A. A practical guide for charting and interpreting the visual color fields. Chicago: Professional Recording Co., 1929. Pp. 81.—W. S. Hunter (Clark).

2159. Miles, W. R. Horizontal eye movements at the onset of sleep. *Psychol. Rev.*, 1929, 36, 122-141.—The behavior of the eyes may be taken to indicate the alert and drowsy states. Sleep is usually immediately accompanied or preceded by closing the eyelids, but it is possible for the onset of normal sleep to occur with the eyes open. In the normal waking state when the individual is attentive to retinal impressions the eyes execute rapid movements back and forth, at the end of each of which there is a fixation or pause. The criteria of the waking

state may be said to be the following: normal speed of such movements, duration of the clearing period, corrective fixation movements, and duration and steadiness of fixations. The test used was to photograph the eye while the observer fixated two dots 40° apart on the horizontal. When the person is sleepy the eye movements are slower and sharp, rectangular records give place to sinu, pendular records indicating a rolling movement during the onset of sleep. In each of three instances the onset of sleep came during adductive movement. The eye muscles are shown to remain active after the visual centers have ceased to function through the retina.—H. Helson (Bryn Mawr).

2160. Ohm, [J.]. Zur Augenzitternkunde. 13. Mitteilung. Der optische Drehnystagmus als objektives Hilfsmittel der Augenprüfung (Fortsetzung). (On nystagmus. Part 13. Optical rotation-nystagmus as an objective means for eye-testing (continued).) *Graefes Arch. f. Ophth.*, 1928, 121, 87-105.—Studies of optokinetic nystagmus in cases of disease of the optic nerve.—D. McL. Purdy (California).

2161. Piéron, H. Temps de latence et intensité des sensations lumineuses. (Note sur d'anciennes recherches d'ordre astronomique apportant la vérification anticipée d'une loi.) (Latent time and intensity of light sensations. Note on some old investigations of an astronomical kind bearing the anticipated verification of a law.) *Année psychol.*, 1926, 27, 207-210.—The Dutch astronomer, Van de Sande Bakhuyzen, more than forty years ago observed that a star of low intensity was reported as passing before the filament of a telescope after a greater delay than one of greater intensity. Piéron plotted the results given in Bakhuyzen's tables and obtained a hyperbolic curve which seemed to fit his own proposed formula:

$$t = \frac{a}{i^n} + K$$

where t is the reaction time; K , a constant representing the irreducible limit of this time; a , the constant representing the reducible perceptible latent time, and n , a constant exponent. He actually found the formula to give results comparable to those observed when $n=1$; $a=480$; and $k=278$ (a and k being in thousandths of a second). This supports the author's conception that the origin of scientific psychology is in physics and astronomy rather than in medicine and philosophy.—M. B. Mitchell (Radcliffe).

2162. Ruckmick, C. C. A new classification of tonal qualities. *Psychol. Rev.*, 1929, 36, 172-180.—Values and dangers of qualitative figures are pointed out by the author, who then proceeds to give a history of the attempts to picture the tonal qualities. Questions concerning the auditory qualities come in for critical discussion. With a close perusal of other auditory investigations for the last few decades before him, the author proposes tentatively a figure which for lack of better designation may be called a "tonal bell." The pitch character of tonal sensations is represented by a continuous gradually ascending spiral line which brings the pitches at each

successive octave into what may be called "note relationship" or "tonality." These note relationships are indicated by lines running generally in a vertical direction. The spiral starts somewhat below the lower auditory limit for tone and continues beyond the upper tonal limit. The interval relationships are indicated in the middle register by cross lines, but they are not important in the classification of tonal qualities as such, being perceptual in character. Volume is represented by a broad base which gradually diminishes until the middle registers are reached, stays approximately uniform through this region, and then diminishes rapidly in the high registers. A cross-section through the tonal bell would therefore give an approximation to the tonal pencil. Since the spirals are closer together in one region than in another, the author has taken this means to show that according to our present data on pitch discrimination a tone may go the rounds of an octave without rising much in pitch in the lowest and highest regions of the scale. The diagram is essentially a qualitative figure.—*H. Helson* (Bryn Mawr).

2163. **Stein, C.** *Hipoacusia progresiva cronica.* (Chronic progressive hardness of hearing.) *Rev. oto-neur.-oftal.*, 1928, 6, 540-548.—Chronic progressive hardness of hearing is that diminution of auditory keenness which progresses in varying phases of rapidity, and which results ultimately in total loss of hearing. It may begin at any period in life. Its etiology has been linked with many different factors by specialists in the field. The causes of the disease, however, are not as yet determined. A significant fact is that this disorder often attacks several members of a family. Some have linked it with otosclerosis as there are many resemblances between the two. The work done seems to point to the fact that, without doubt, circulatory disturbances concomitant with arteriosclerosis can provoke the development and the advance of the degenerative alterations of atrophy in the acoustic nerve, its organ, and the respective ganglions. Stein believes from his investigations that not only the organic disturbances, but also those of a functional nature, can prejudice the apparatus of the auditory nerve, and, that if they recur frequently or if they persist over a long period they encourage the atrophic processes in the internal ear. It is also apparent that heredity plays a significant rôle.—*J. W. Nagge* (Clark).

2164. **Thelin, E., & Altman, E. R.** *Identification of monocular functions.* *J. Exper. Psychol.*, 1929, 12, 79-87.—An experiment designed to determine to what extent it is possible for an observer to tell "in which eye a sensation is." The observers were kept ignorant of which eye had been stimulated by low illumination in a dark room, and the authors conclude that with some individuals, at least, the eye involved in monocular functions may be identified when outside aids are removed. The ability to tell which eye is functioning is subject to training in some observers. Possibly all subjects might acquire this ability under prolonged training. Early uncertainty gives way to positive assurance concerning the eye or eyes stimulated.—*S. Renshaw* (Ohio State).

2165. **van Vloten, W.** *Vom Geschmack.* (Concerning taste.) München: Delphin-Verlag, 1928. Pp. 184. M. 4-5.—*W. S. Hunter* (Clark).

[See also abstracts 2126, 2172, 2186, 2196, 2198, 2303, 2382.]

FEELING AND EMOTION

2166. **Adler, A.** *Feelings and emotions from the standpoint of individual psychology.* In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 316-321.—Individual psychology does not consider the parts of the mind or the psyche but rather the entire mind. Its interest in feeling and emotion is not in the sensory or feeling units or in the anatomical or physiological basic factors, but in the end or aim of the feeling or emotion. Only the possibilities for the social development of emotions are inborn; all other manifestations depend on the social milieu. The emotional character of an individual most usually develops as a compensation for organ inferiority or being spoiled or hated as a child. Illustrative cases are cited.—*C. Landis* (Behavior Research Fund).

2167. **Bekhterev, V. M.** *Emotions as somato-mimetic reflexes.* In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 270-283.—Research has shown that neither the intellectualistic nor the James-Lange theory is correct. Reflexology has set up the following differentia: (1) general somato-mimetic tonus, which corresponds to what is called mood in subjective psychology; (2) various somato-mimetic reflexes (emotions according to the subjective terminology) which may be exciting, depressing or mixed; and (3) somato-mimetic disturbances or affects, as the psychologists designate them. The inexactness of the introspective method is responsible for the poor development of this field at present. The somato-mimetic reflexes are accounted for on the basis of their evolutionary value in emergencies. These reflexes are localized in the control centers for the vegetative nervous system in the gray matter in the region of the lower part of the third ventricle.—*C. Landis* (Behavior Research Fund).

2168. **Brett, G. S.** *Historical development of the theory of emotions.* In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 388-397.—The historical development of several current theories of emotion is traced, showing their common origin in Greek philosophy. The importance of the evolution of emotion for other lines of evolutionary development is stressed in a similar fashion.—*C. Landis* (Behavior Research Fund).

2169. **Cannon, W. B.** *Neural organization for emotional expression.* In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 257-269.—The work of Bard is reviewed, showing how the localization of the expressive reactions of rage in decortical preparations depends on the integrity of the posterior half of the diencephalon. This region has been shown by

other workers to be the center of the sympathetic nervous system. This diencephalic region is a part of the "old brain" which is common to all members of the vertebrate series and has served throughout not only for the integration of the external expression, but for the internal mobilization of bodily forces in emergency. If cognitive consciousness is associated with cerebral function, then the neural mechanisms for the more primitive emotional expressions operate in a region outside the range of consciousness. This would explain such experiences as "feeling possessed by rage," "surges up within us," and the like. The compactness of this diencephalic control also offers evidence and explanation for the uniformity of visceral response in emotion.—C. Landis (Behavior Research Fund).

2170. Carr, H. A. The differentia of an emotion. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928, Pp. 228-235.—The conventional definitive characteristics of an emotion are inadequate because they do not differentiate the emotions from the non-emotional adjustments. The two do not differ in nature, intensity, innateness, adaptiveness, or biological utility. The somatic activities are continually being excited to react in an adjustive manner to the behavior demands of the organism. The emotional reactions are those that are awakened when the organism, temporarily at least, is unable to respond in an orderly and efficient fashion to a highly stimulating situation, and for this reason they partake of the nature of a somatic disturbance. The non-emotional reactions represent a relatively coordinated and orderly type of somatic readjustment.—C. Landis (Behavior Research Fund).

2171. Dugas, L. La passion et les passions. (Passion and passions.) *J. de psychol.*, 1928, 25, 745-794.—Passion is considered to be a fluctuation of sentiments, "a tumultuous life of the mind which seeks equilibrium and never attains it." The author discusses passion in general, and the chief characteristics of passion, and then gives a classification of passions. "Passion," he says, "is not only characterized by the richness of its content, the complexity of its elements; it is also, and more often, characterized by the subordination of its elements, by the hierarchy which is established between them, and by the system which they form." Contrasted with emotion, passion is less transitory and less subject to the exigencies of the moment. Passion and inclination differ only in degree. The passions which Dugas considers to be the essential ones and which are discussed in detail are: the nutritive passions, greediness and drunkenness; the dynamic passions, desire for risk, adventure, play, ambition; the static passions, avarice, spite, jealousy; weak passions, in which the passion for collecting and similar activities find a place; finally, the passions of pleasure and idleness. The similarities and dissimilarities of each are pointed out in some detail. The entire discussion is based on an analysis of the previous literary efforts along these lines of psychologists and litterateurs, no experimental or physiological data

being given in support of the classification.—N. L. Munn (Clark).

2172. Gault, R. H. Pleasurable reactions to tactual stimuli. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 247-254.—Deaf subjects were read various bits of poetry which they perceived tactually by placing the finger tips on a telephone receiver diaphragm. Certain verses were accompanied by marked pleasurable reactions. To investigate this further the receiver was placed against the chest wall over the sternum and rhymes of various cadences and meters read to a subject. Certain of the combinations were more pleasant than others. The author does not believe that this may be interpreted on a nativistic basis, since practice was necessary in every case to set up the pleasurable reaction.—C. Landis (Behavior Research Fund).

2173. Gruehn, D. W. Feelings and emotions in the psychology of religion. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 372-384.—Since Schleiermacher all religious processes have quite generally been referred to the affective side of mental life. When one turns to psychology one finds a lamentable ignorance concerning feeling and emotion. The only thing scientific psychology can say about the affective life is "Ignoramus." An attempt to arrive at facts from the sources of language shows that at least 500 or 600 terms are available which are used to describe feelings, but they add nothing to the two terms pleasantness and unpleasantness. It remained for the Wurzburg School really to give a working basis to the psychology of religion. This school has shown that religion or religious feeling is a specific compound, synthesis, or Gestalt, in which the ego-function and self-function (emotion and intellect) appear in intimate fusion with each other. The attempt made by German classical idealism (Kant, Fichte, Hegel) to synthesize knowledge failed in part because it did not recognize the fundamental nature of the religious experience.—C. Landis (Behavior Research Fund).

2174. Hoisington, L. B. Pleasantness and unpleasantness as modes of bodily experience. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 236-246.—There are at least three or four modes of bodily experience. Muscular pressure, i.e., the pressures and strains correlated with the contraction of skeletal muscles, constitute one mode. The second is bright pressure (pleasantness) which is correlated with a state of non-contraction of the skeletal muscles. The third is dull pressure (unpleasantness) which is correlated apparently with contraction of the visceral muscles; and the fourth, general bodily tensions. In the integration the highly focal state of the perceptive pressure-strains precludes the affective modes from experience. In brief there are three modes, two of which enter into the pattern of experience as pleasantness or unpleasantness, and finally experience itself, which admits but a single

pattern at any one moment.—*C. Landis* (Behavior Research Fund).

2175. **Jørgensen, C.** A theory of the elements in the emotions. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 310-315.—The fundamental elementary emotions or emotional experiences are: (1) the fear nucleus; the specific energy in dread, terror, fear, anxiety, apprehension; (2) rapture, joy, happiness, satisfaction; (3) grief, despair, pain, sorrow, despondency; (4) hunger of the soul, want, desire, longing; (5) furiousness, anger, grumbling, and if present the emotional element in "strength"; and (6) shame, shyness, embarrassment, bashfulness. Mixed emotions appear when two or more fundamental elements are simultaneously in action. Pleasure and displeasure are not true emotional elements.—*C. Landis* (Behavior Research Fund).

2176. **Langfeld, H. S.** The rôle of feeling and emotion in aesthetics. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 346-354.—Emotions are at the root of esthetic creation, but not as a mysterious driving force that guides the artist in his endeavors, or supplies the energy for his effort. Neither is a man emotional because he is artistic. There must be disturbing (emotional) problems in the life of the artist in order that there may be true artistic creation. Langfeld believes that emotion is a necessary element in the inspiration of artistic work, but that it is not a constantly present factor in artistic production. On the other hand the esthetic experience is a complex affair of feeling-tone and specific organic response or attitude. The esthetic experience is in the total situation, and the esthetic quality cannot be found in any of its parts.—*C. Landis* (Behavior Research Fund).

2177. **Piéron, H.** Emotion in animals and man. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 284-294.—"Thus it seems to us that emotion may be described as an extreme level of affect, tending toward the pathological as a limit. It consists essentially in an abnormal discharge of nervous energy, a discharge which exceeds the amount which can be used for the normal reactions of the individual, and which occurs even when there is no occasion for reaction. It consequently involves a diffusion of excitatory impulses in the viscera, which, on the whole, seems to be not only useless, but harmful, and even pathogenic, adding its own ill effects to the nervous exhaustion which results from the excessive expenditure of discharged energy. These expressions of emotions are found only among the higher animals, whose associative nervous centers are well developed, the different species varying considerably in emotional susceptibility. . . . It is probable that these centers contribute a reserve of nervous energy releasable under the influence of intense affective shock, and that it is this sudden expenditure of energy which bring about the overflow into motor and visceral organs."—*C. Landis* (Behavior Research Fund).

2178. **Reymert, M. L.** Why feelings and emotions? In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 423-426.—The chairman's opening address.—*C. Landis* (Behavior Research Fund).

2179. **Ruckmick, C. A.** Why we have emotions. *Scient. Mo.*, 1929, 28, 252-262.—*J. F. Dashiell* (North Carolina).

2180. **Stern, W.** "Ernstspiel" and the affective life: a contribution to the psychology of personality. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 324-331.—"Ernstspiel" is a personality concept, that is, one which is defined by the relation of a single factor to the total life of the individual. Activity is called serious when there is agreement between the apparent and the real; the behavior appears to be what it is. The immediately given content of play is incomplete and lacking in significance. *Ernstspiel* covers the behavior between serious and play. In the affective life there are gradations in various directions; in addition to the gradation of affective intensity there is also a gradation of affective seriousness. In normal life the finest example of the *Ernstspiel* type of life is the great humorist, in whom fixed determination and compelling importance never absorb the individual so completely that he cannot turn upon them playfully and snap his fingers at them.—*C. Landis* (Behavior Research Fund).

2181. **Terry, J. S.** Training the emotions. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 400-417.—"I want it clearly understood that my knowledge of psychology is not enough to permit me to understand what its battles are about. And as to scientific knowledge of the emotions I remember that William James, after reading the classics on the subjects, said he would as lief read verbal descriptions of the shapes of the rocks in a New England field. . . . Of course I'm rather late in urging training of the emotions. Christ did it about two thousand years ago. . . . Christ said to his disciples, 'Love one another.'"—*C. Landis* (Behavior Research Fund).

2182. [Various.] *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. xvi + 454. \$6.00.—This book contains the papers given at a symposium held at Wittenberg College, Springfield, Ohio, Oct. 19-23, 1927. For abstracts of these papers see III: 1827, 1829, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 2118, 2128, 2139, 2166, 2167, 2168, 2169, 2170, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2180, 2181, 2182, 2183, 2256, 2307, 2358. Half-tone photographs of the authors and officials of the symposium are given. Following each paper is a stenographic report of the discussion of that paper at Wittenberg.—*C. Landis* (Behavior Research Fund).

2183. **Woodworth, R. S.** How emotions are identified and classified. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.:

Clark Univ. Press. 1928. Pp. 222-227.—McDougall's doctrine that specific emotions are the affective phases of specific instincts, though having gained wide popular acceptance, has not found experimental verification. Watson's list of three basic emotions is a behavior list and one which lacks evidence for any basic distinctions in intra-organic terms. Therefore, the basis of distinction of emotions must be found in the external situation. This, however, leads to further difficulties, e.g., cold-blooded unemotional avoidance or attack; anger or fear without overt attack or avoidance. All this leads to the conclusion that the relation of situation and response is the essence of the identification of emotions.—C. Landis (Behavior Research Fund).

[See also abstracts 2256, 2303.]

ATTENTION, MEMORY AND THOUGHT

2184. Erickson, C. I. The sense of direction in mental imagery. *Psychol. Monog.*, 1928, 39, 67-71.—This study was conducted to determine how a listener creates spatial relations and patterns among the objects and persons referred to by a speaker or reader. Paragraphs from O. W. Holmes' *Revelations of a Stone*, and G. W. Cable's *Mary's Night Ride*, were read to two classes in psychology. In the first paragraph the listener is expected to participate in the scene portrayed, while in the second paragraph he is expected to be only a witness of what is portrayed. After the reading of each selection the subjects answered questions concerning the direction assumed in their mental imagery in reference to the objects and persons of the selections. The following conclusions summarize the findings: (1) over 58% in each class shifted 45° or more from their classroom orientation; (2) although facing different directions the two groups shifted about the same extent; (3) the amount of shifting differed with the type of experience presented; (4) individuals differed greatly in the extent of their shift.—C. W. Brown (Chicago).

2185. Gudeff, P. T. *Gedächtnis und Erfahrungen*. (Memory and experiences.) (Trans. by Otto Müller.) Berlin: Deutsche Rundschau, 1928. Pp. 35. M. 0.50.—W. S. Hunter (Clark).

2186. Hart, J. R., Jr. The range of visual attention, cognition and apprehension for colored stimuli. *Amer. J. Psychol.*, 1928, 40, 275-283.—Three sets of gray cards were prepared with 2 to 12 round dots of each color; blue, green, yellow or red of Hering papers in each set. These were exposed for 40σ by means of the Whipple tachistoscope. The judgments for the range of attention, cognition, and apprehension fall into curves of the phi-gamma type for red, yellow, blue and green stimuli. The limens for attention are smallest, for cognition intermediate, and for apprehension the largest, in confirmation of Oberly's results with uncolored stimuli. The limens for red are constantly largest for each of the three systematic categories and for the different degrees of subjective assurance. The limens for green are similarly smallest, with those for yellow and blue

intermediate. No such relation is discovered with regard to the magnitude of the values of the coefficients of precision. Brightness and saturation differences do not seem to account for these liminal differences, and the *Anklingen* times of the colors possibly offer a more satisfactory explanation.—R. Stone (Clark).

2187. Jersild, A. Primacy, recency, frequency, and vividness. *J. Exper. Psychol.*, 1929, 12, 58-70.—A study of immediate memory for meaningful material, which consisted of 70 narrative statements presenting a biographical sketch of a fictitious character. The material was presented in such a way as to show the relative potency of variations in the method, designed to test the influence of primacy, recency, frequency, and vividness. A discussion of the findings includes an evaluation of these four principles.—S. Renshaw (Ohio State).

2188. Krueger, W. C. F. The effect of overlearning on retention. *J. Exper. Psychol.*, 1929, 12, 71-78.—50% overlearning is highly economical from the standpoint of retention for intervals of 2 to 28 days for lists of nonsense syllables, and the larger the interval, the greater is the economy. Further increases of overlearning, however, proved to be uneconomical for most intervals.—S. Renshaw (Ohio State).

2189. Landry, L. Les éléments de la notion d'espace. (Elements of the conception of space.) *J. de psychol.*, 1928, 25, 824-827.—The author thinks that we may have to revise the conception that spatial ideas are acquired and that this acquisition is dependent primarily upon vision and touch. We may refer no more to a *quod fuit in sensu* but to the *ipse intellectus*.—N. L. Munn (Clark).

2190. Norris, O. O. A behaviorist account of intelligence. *J. Phil.*, 1928, 25, 701-714.—To behave intelligently is, primarily, to choose among differently patterned stimuli; secondarily, it is to choose among differently patterned meanings. Growth of intelligence is dependent upon motivation as well as upon growth of raw capacity, if such a thing can be imaginatively or theoretically isolated, as it cannot physically and perceptually. To behave intelligently and hence adaptively implies such a caring for consequences as to make adaptation worth while. Perception is the intellectual process or act by which stimulus-patterns are individuated and their meanings are evoked. Perception is the intellectual or differentiating behavior upon the basis of which preliminary or provisional, rational adaptation to our objective situations is effected. An idea is an implicit action of a reaction-structure by which an operation or adaptation is effected.—A. P. Brogan (Texas).

2191. Philip, Brother R. The measurement of attention. *Cath. Univ. Amer.: Stud. Psychol. & Psychiat.*, 1928, 2, No. 1. Pp. xi + 80.—The author adopts the common usage of the term attention, identifying it with concentration, and sets out to measure it. He makes an extensive survey of the previous research in this field, grouping it according to Geissler's classification. A comparison is made

between the length of the regular reaction time, mean variation, and the reaction time difference as measures of attention, and the latter, following the method of Woodrow, is adopted as the criterion of attention. In making this study with 49 male senior college students as subjects he devises a technique for taking continuous reaction time of ten subjects at the same time. A battery of tests is developed for the measurement of attention in the school room. The validity is determined by correlation with reaction time difference, $r = .596$. The tests consist of "compound number span," with letters interspersed; mental multiplication, 2-4 place numerals by one digit; alphabet; mental addition, horizontal instead of vertical; cancellation, of three sorts at the same time. Growth curves are given for each of the components, most of them reaching a plateau at the age of 15; the tests were standardized by giving them to 1,600 school children, ages 10 to 19. A correlation of .09 is obtained between the score on this test and Mental Ages determined on a sampling of 243 children.—W. McTeer (Chicago).

2192. Piéron, H. De la loi que relie la difficulté à la grandeur des tâches en théorie et en pratique. (On the law which unites the difficulty to the magnitude of the task in theory and in practice.) *Année psychol.*, 1926, 27, 211-214.—Practically for comparing the individual capacities the general law is useful that the time necessary for learning a phrase is proportional to the square of the number of words in it. Expressed mathematically this is:

$$t = an^2$$

where t is the time, n is the number of words and a is a constant. Theoretically, the law is more complex and might better be expressed:

$$t = an^f + a^n$$

where a , f , and a are all constants which can only be determined by using much longer phrases.—M. B. Mitchell (Radcliffe).

[See also abstracts 2254, 2368, 2442.]

NERVOUS SYSTEM

2193. Adrian, E. D. Le message sensoriel. (The sensory message.) *J. de psychol.*, 1928, 25, 713-720.—A review of the principal results obtained by Adrian and others on the characteristics of the nerve impulse, which, according to the author, is the basis of sensation. The message transmitted to the brain via the nerve fiber is a simple one consisting of a number of brief impulses alike in intensity, duration, and rapidity. A variation in the total number and frequency of impulses is the only phenomenon which may introduce a differential factor as far as the nerve fiber itself is concerned. "In a simple nerve fiber the frequency of impulses depends upon the force of the stimulus at the terminal organ . . . the discharge continues until the stimulus disappears or becomes ineffective." Certain evidence brought forth by Lapicque to show that nerve fibers differ in diameter, and that this difference leads to a differ-

ence in chronaxy and rapidity of conduction, is discussed. Adrian thinks it unlikely that nerve fibers may be so differentiated in diameter as to give a special character to the sensory messages coming from the various organs. Sensory specificity, he thinks, must be looked for in special connections established between the nerve fibers and the central nervous system. Regarding the relation of the nervous impulse to sensation Adrian says, "The sensation that we experience at the time of a particular stimulation is related in a very simple fashion to the sensory message which penetrates into the brain. Sensation increases and decreases in intensity with the increase and decrease of the frequency of impulses; its duration seems to be almost in accord with that of the sensory message, and effectively the latter seems to be translated without deformation into a corresponding mental change. There is, naturally, this difference, that the sensory message comprises discontinuous impulses, while sensation increases and decreases in a continuous fashion; but for that matter, we have no proof that the message may be modified in some fashion before having attained the *terra incognita* where the body and mind interact." In any case it is apparent that these sensory impulses are "the messages by means of which our mental world has been constructed."—N. L. Munn (Clark).

2194. Bodenheimer, E., & Korbach, H. Klinisch-anatomischer Beitrag zur Pupillarfasertheorie. (A clinical and anatomical contribution to the theory of the pupillary fibers.) *Graefes Arch. f. Ophth.*, 1928, 121, 46-72.—It has long been disputed whether the pupillary reflex is subserved by a special set of afferent fibers in the optic nerve, or whether it employs the fibers of visual sensation. The authors give a comprehensive review of the literature dealing with this question, and describe a relevant study which they have made. In a case of optic nerve atrophy the right eye was amaurotic but its pupillary response was preserved. The left eye had a feeble perception of light in addition to the pupillary response. Post-mortem examination revealed that only certain dorsally situated axis cylinders in the optic nerves were still intact. There was no essential difference between the condition of the right optic nerve and that of the left. To explain their findings the authors assume that the pupillary and visual sensation fibers are identical, but that the threshold of the pupillary center is lower than that of the visual center. Thus the impulse conducted through the functional portion of the right optic nerve was strong enough to excite a pupillary response, but too weak to elicit visual sensation. 44 references.—D. McL. Purdy (California).

2195. Coghill, G. E. Anatomy and the problem of behavior. New York: Macmillan, 1929. Pp. xii + 113. \$3.00.—Three lectures delivered at University College, London, on the following topics: the development of behavior and its anatomical explanation in a typical vertebrate, dynamic antecedents of neural mechanisms, and growth of the nerve cell and the interpretation of behavior. The author reviews his work upon the correlation of behavior and

the development of the nervous system in *Amblystoma punctatum* and emphasizes the conception of physiological gradients in connection with the development of neural tissue. Behavior develops not as a coordination of reflexes but as a differentiation of highly individualized responses from a complex total behavior. This is illustrated with data on the reflexes of the limbs and gills and by a study of the relationship between swimming and walking behavior. Stress is laid upon the suggestion that the development of behavior, including learning, is conditioned by growth in the nervous system. "Growth of the terminals of axones and dendrites through microscopic dimensions is sufficient to have profound effect upon behavior." The solution of the problem of locomotion in water is solved in *Amblystoma* as a result of the growth of nerve cells over a distance of less than one one-hundredth of a millimeter. The author notes the similarity between his own view of the development of behavior and that held by the Gestalt psychologists.—W. S. Hunter (Clark).

2196. Haldi, J., Larkin, J., & Wright, P. Weight relations in the rabbit's brain. *Amer. J. Physiol.*, 1929, 88, 107-116.—The brains of rabbits were removed and divided into four portions, cerebral hemispheres, cerebellum, midbrain and medulla. Each portion was weighed at once to determine the wet weight, and after thorough drying in a drying oven to find the dry weight. It was found that the ratio both of the total and of the partial wet and dry weights was always constant. In the second study chemicals and drugs were injected into the blood stream in order to find out whether the distribution of the water contents of the brain is thereby altered. Difference in the water content ratio of the different parts was found. The suggestion is made that, in the absence of specific knowledge in regard to the physico-chemical foundation of mental disorders, the "physico-chemical changes in the brain protoplasm such as increased or decreased hydration should be considered as a possible important factor."—M. J. Zigler (Wellesley).

2197. Tuttle, W. W. The effect of the rate of stimulation, strength of stimulus, summation and reinforcement on the rate of the conduction of a nerve impulse through reflex arcs. *Amer. J. Physiol.*, 1929, 88, 347-350.—"Conduction time" is arbitrarily defined as "the interval of time elapsing between the application of a stimulus to a receptor and the change in the electrical potential at the muscle as indicated by the action current." The Achilles-jerk is the reflex to which stimuli were applied in the four normal male subjects. Variations in regard to the four factors—rate of stimulation, intensity of stimulation, summation and reinforcement—in no case produced any influence on the conduction time in any of the subjects.—M. J. Zigler (Wellesley).

[See also abstracts 2214, 2215, 2232.]

MOTOR PHENOMENA AND ACTION

2198. Coons, J. C., & Mathias, R. J. Eye and hand preference tendencies. *J. Genet. Psychol.*,

1928, 35, 629-632.—By use of Snyder's tests for eye preference, for near- and far-sightedness, and for hand preference, it was shown that from 9.9 to 19.5 years of age there is an increase of ambicular and decrease of monocular tendencies, that eye preference is not determined by relative visual acuity, that hand preference and eye preference tend to be homolateral, and that eye preference is determined by use and disuse.—J. F. Dashiell (North Carolina).

2199. Dohlman, G. Experimentelle Untersuchungen über die galvanische Vestibularisreaktion. I. (Experimental research on the galvanic vestibular reaction. I.) *Acta Oto-Laryngol., Supplementum VIII*. Uppsala: 1929.—The first half of the supplement is devoted to an historical review of all the experimental work on the galvanic vestibular reaction. Under normal conditions the passing of a galvanic current through the labyrinth causes objectively a nystagmus in the same direction as the current and a tendency to fall to the opposite side, and subjectively, a feeling of dizziness. The earlier investigators, as Hitzig, Strehl, and Erb, maintained that this result was due to a stimulation of the brain. Breuer, Jensen, and Bard concluded that it was due to stimulation of the sensory epithelium of the labyrinth either directly or indirectly by means of katephoresis in the endolymph. This position is unreliable, however, since the reaction may occur after the destruction of the labyrinth, according to Bárány, Neumann, Marx, and Mann. The remaining possibility is that the reaction is due to a stimulation of the vestibular nerve. Research done by Bauer and Leidler on lesions in the central nerve showed marked changes in the labyrinth reflex. Lorentes found gross changes in the reaction of the eye muscles so that the eye could turn fully back. The second half is a report of the author's own experiments. He concludes that: (1) the galvanic reaction has no significance for the judgment of the functioning condition of the peripheral labyrinth or the sensory epithelium; (2) the galvanic reaction is released in the vestibular ganglia and indicates, therefore, the presence of ganglionic cells capable of functioning; (3) the falling symptom can be called forth, after both labyrinths have been removed, by destroying the vestibular ganglia on one side; therefore, they must have a real tonus which maintains the equilibrium; (4) the modification of the tonic eye reflexes through injury in the vestibule brings with it a modification of the galvanic reaction by preserved vestibular reflexes.—M. B. Mitchell (Radcliffe).

2200. Engle, E. T. The effect of daily transplants of the anterior lobe from gonadectomized rats on immature test animals. *Amer. J. Physiol.*, 1929, 88, 101-106.—The reciprocal relationship of the pituitary and the gonads has been indicated in previous studies. It was found that the pituitary of the gonadectomized animal is larger and heavier than that of the normal animal. The present investigation undertakes to measure the gonad-stimulating influence of the pituitary by transplanting daily the fresh anterior lobes of gonadectomized rats in immature rats and mice. Control animals were selected from the same litters. The anterior lobes of non-

gonadectomized rats were transplanted daily in the controls. Comparative study of these two groups in regard to arrival at sexual maturity and size of the ovaries provided the means of measuring the gonad-stimulating influence of the anterior lobe. The results show that the anterior lobe of gonadectomized rats invariably shortens the period of sexual immaturity, and that the ovaries of rats and mice provided with transplants of gonadectomized rats are stimulated to greater development. The gonad-stimulating influence of the anterior lobe of gonadectomized rats is shown to be clearly greater than that of normal animals.—*M. J. Zigler* (Wellesley).

2201. **Fox, E. J.** An investigation of the effect of glandular therapy on the intelligence quotient. *Ment. Hygiene*, 1928, 12, 90-102.—A group of 182 patients attending a mental clinic who were diagnosed as glandular dysfunction showed a slightly lower IQ than did the general run of patients attending the clinic. The hyperthyroid group showed the lowest correlation between dysfunction and IQ, and the hyperpituitary group the highest correlation. Re-examination after glandular therapy showed, in a small group, an appreciable gain in the IQ in the pluriglandular cases, and a slight loss in the hypopituitary patients.—*G. J. Rich* (Bellevue Hospital).

2202. **Garnett, A. C.** Instinct, intelligence and appetite. *Brit. J. Med. Psychol.*, 1928, 8, 249-263.—Instinctive behavior is defined as "an innately determined response to the cognition of a meaningful situation." Thus an instinctive activity is recognized as intelligent when it involves not only cognition but also attentive striving followed by satisfaction and relaxation. The cognition is not of a single stimulus but of a complex situation or *Gestalt*. The characters of configurations are attributed to "something in the innate structure of the individual." A discrimination is made between the appetitive (sex and nutrition) instincts and the non-appetitive instincts. The author considers instincts as dynamic not in themselves, but only when stimulated. Internal processes and secretions are adequate stimuli for the appetitive instincts. Lastly, a distinction is made between instinctive tendencies and general mental energy as exhibited in playful activity. The latter differs from the former in having no definite beginning and end, but is similar in that it is a result of a formed configuration.—*M. B. Mitchell* (Radeliffe).

2203. **Gemelli, A.** Ricerche sperimentale sulla natura e sulla diagnosi dell'abilità manuale. (Experimental researches on the nature and determination of manual skill.) Milan: Società editrice "Vita e pensiero," 1929. Pp. 54.—Photographic records were taken of the movements of the index finger made while holding a stylus upon a line drawn upon a moving table. Analysis of the records of 15 subjects showed the angular movements to be made up of many discontinuous movements. Lehmann's observed proportionality between the angular velocity and the frequency of discontinuity was shown. The constant necessary to equate these two measurements was found; it decreased with fatigue and increased with practice, thereby failing to support Lehmann's

contention that such a constant is an index of individual variability. Another number was computed showing the proportion of the velocity of flexion to the velocity of extension. With five subjects this increased from about .75 to above 1.00 in 15 days. The amplitude of the movements showed a steady decrease. A second group of experiments applied analytical and analogical tests to 35 employees of a textile factory. Analytical tests for a general "motor ability" correlated very poorly with the ratings of factory officials. But tests consisting of situations as analogous as possible to the particular kind of work gave high correlations with the official ratings. Tests upon ten shoe-factory workers consisted of estimating the speed and quality of work at intervals from the beginning of apprenticeship. Tests made at eight days, one month, and three months showed a correlation, increasing with time, with tests made at six months. The author reviews at length the current literature on tests of skill. He concludes that there is no general motor ability as such which can be measured, and that intelligence is without doubt a factor in manual skill.—*B. F. Skinner* (Harvard).

2204. **Ito, I.** A statistical study of hand grip from medico-legal point of view. *Tokyo Iji Shishi* (Tokyo Medical News), 1927, No. 2,532.—Working with factory hands it was found that the hand grip of women was 60% as strong as that of men. In the case of injury a disabled thumb decreases the strength of hand grip more than any other injured finger; the second finger follows the thumb in affecting hand grip. The same injury on the same member does not decrease hand grip in the same degree. The individual differences are very great. Hand grip of both men and women begins to weaken at 45 years of age.—*J. G. Yoshioka* (Institute for Juvenile Research).

2205. **Klemm, O.** Zufall oder Geschicklichkeit. (Chance or skill.) *Neue psychol. Stud.*, 1929, 5, 27-64.—In an effort to gain some insight into those processes which lie back of human activity in the narrower sense, Klemm makes a study of the actions necessary to manipulate successfully three types of automatic gambling machines, each requiring a fundamentally different type of action. First, catching is considered; in this machine a cup must be mechanically moved in order to catch a falling ball. Balancing is demanded in a machine where boards must be moved to left or right to catch and retain a coin falling from above. Throwing a coin through certain specified openings is necessary in the third type. In all three of these machines it was found that practice produced a noticeable improvement in accuracy. Since a practice effect implies skill rather than chance, these data are used as a basis for the development of a theory of throwing movements, which are considered a simple example of action in general.—*D. E. Johansson* (Clark).

2206. **Klemm, O.** Über die Atmungssymptomatik bei Untersuchungsgefangenen. (The symptomatic breathing of prisoners being investigated.) *Neue psychol. Stud.*, 1929, 5, 113-132.—According to Benussi the inspiration-exhalation ratio is larger be-

fore than after testimony; in the case of lying, however, this relation is reversed. Klemm tested 6 prisoners on trial for serious offenses by taking pneumographic records under several conditions. The results do not contradict Benussi's, but are in many cases very ambiguous. It is emphasized that this criterion for lying is valid only when other experiences do not so overlay it as to make it impossible of interpretation. It is easier to lie about long past than recent events; this is suggested as an explanation of Benussi's more unambiguous laboratory experiments.—*D. E. Johannsen (Clark).*

2207. Landis, C., & DeWick, H. N. **The electrical phenomena of the skin (psychogalvanic reflex).** *Psychol. Bull.*, 1929, 26, 64-119.—An inclusive review of 301 titles, covering work on the phenomenon, under the headings: history, methodology, physical nature of the psychogalvanic reflex, its anatomy, its physiological nature, its psychological study, its applications, and miscellaneous topics.—*J. F. Dashiell (North Carolina).*

2208. Rounds, G. H. **Is the latent time in the Achilles tendon reflex a criterion of speed in mental reaction?** *Arch. Psychol.*, 1928, No. 95. Pp. 91.—Myograph records of the reaction time of the Achilles tendon reflex are correlated with scores from mental tests (cross-out, completion, association, etc.) for 80 subjects. The reaction time is seen to be an expression of a physical speed mechanism probably uniform throughout the organism. The failure to correlate significantly with test scores is indicated as showing the importance of factors in mental speed such as original endowment, learning, and practice. The author concludes, however, that it seems likely that there is a general speed ability, more or less intimately associated with the level of intelligence.—*B. F. Skinner (Harvard).*

2209. Sasamura, I. **Influence of work at high temperature upon our body.** *Shakai I-gaku Zasshi (Journal of Social Medicine)*, 1927, 4, No. 84.—Locomotive engineers and firemen were studied in summer as to body weight, body temperature, pulse rate, blood pressure, urine, and hand grip. The temperature in the cab was 10° C. on an average higher than the external temperature, but humidity was 30% less inside than outside. Body weight decreased after work, and it decreased more on hot days than on cold days. On night duty weight decreased still more. In comparing body temperature before and after duty more firemen showed an increase than engineers. Pulse rate, however, showed just the opposite result, that is, more engineers had an increased pulse rate than firemen. Blood pressure of both engineers and firemen showed an increase in four measurements, but a decrease in nine measurements. Hand grip invariably decreased after work. The specific gravity of urine increased, but no abnormality in urine was detected. Body temperature during work increased somewhat in proportion to the temperature in the cab. In some cases it went up as high as 37.5° C.—*J. G. Yoshioka (Institute for Juvenile Research).*

2210. Seashore, R. H. **Stanford motor skills unit.** *Psychol. Monog.*, 1928, 39, 51-66.—A group of six motor tests were combined into a compact transportable unit which is suitable for use in school and factory as well as in laboratory work. The six tests used and the types of coordination tested follow: The Koerth pursuit rotor tests the eye-hand coordination in following a target moving in a circular path at high speed. The Miles motility rotor tests speed in turning a small hand drill. The Brown spool-packer tests speed in a bi-manual coordination. Motor rhythm is tested by the precision shown in following a regular rhythm pattern on a telegraph key. The serial discriminator tests the speed of finger movements in a discriminative reaction to a visual series. Speed of forearm and finger movement is tested by tapping on a telegraph key. Complete details with working drawings for the construction and operation of this unit are supplied in this article. From a preliminary study on 50 university men the following conclusions are drawn: (1) The average intercorrelation of eight serial motor performances (including the battery of six tests) was found to be .25. (2) The correlations were only slightly positive on scores for the eight motor tests and training in typing, instrumental music and competitive athletics. (3) The reliabilities of the motor tests ranged from .75 to .94, with an average of .84 (not stepped up).—*C. W. Brown (Chicago).*

2211. Templeton, R. D., & Johnson, V. **Further observations on the nature of hunger contractions in man.** *Amer. J. Physiol.*, 1929, 88, 173-176.—Hunger contractions were recorded by a three balloon system. The balloons are inserted by way of the esophagus, one in the cardiac end, the second in the corpus and the third in the pyloric end of the stomach. The chief object of the study was to ascertain whether the contractions of the empty stomach are similar in nature to those which take place during digestion. The results indicate that the contractions in both cases are of the same general peristaltic type. The contractions in weak hunger periods may actuate only balloons 2 and 3, while the strong hunger contractions excite in order all three balloons. The movements of the balloons were found to coincide with the subjective state of hunger reported by the subject.—*M. J. Zigler (Wellesley).*

2212. Travis, R. C. **Protracted passive oscillation and intermittent rotation of the body; variability in perception and reaction.** *J. Exper. Psychol.*, 1929, 12, 40-57.—This paper deals with the variability in the perception of a response to successive stimuli in protracted passive oscillation and intermittent rotation of the body in rectilinear as well as rotary directions. The methods have been described previously in detail by Travis and Dodge in *Proc. Nat. Acad. Sci.*, 1927, 13, 843-846, and *Psychol. Monog.*, 1928, 38, 1-96. The perception of movement fluctuates markedly, varying from positive through zero to negative reactions. The various kinds of response seem to occur in volleys or waves, giving a rhythmical appearance to the records, which corresponds roughly to the subject's introspective report, and indicates variations in the irritability of

the vestibular mechanism in response to repeated or continuous stimulation. The author regards this lowering and heightening of variability as of fundamental importance in interpreting thresholds. The rhythmical variation in the irritability of the neuro-vestibular system to passive clockwise and counter-clockwise movements cannot be wholly attributed to previous excitation, because a similar phenomenon is manifest during the non-stimulated period, when the platform remains physically fixed and the subject responds to hallucinations of motions in definite directions. Central factors of various possible origins probably facilitate or inhibit the reception of passive oscillation. Possible rivalry may exist between the right and left vestibular systems in man. However, further knowledge of the anatomy and physiology of the receptors for rectilinear oscillation is necessary before the probability of rivalry between the two labyrinths can be adequately estimated. Movements which are adequately perceived probably fall in a period of increased excitability of the vestibular system, while those vaguely perceived or unperceived probably fall in a period of relative refractoriness of the system. As the acceleration of protracted oscillation progressively decreased, the intervals between periods of correct response increased. Under prolonged stimulation near the 50% threshold, the vestibular system became negatively adapted. The interval of time between the beginning of the stimulation period and the onset of the adaptation process decreased with the decrease in intensity of stimulation, but varied from day to day. At irregular intervals in protracted intermittent rotation in one direction the movement periods were perceived as still periods, and the still periods as movements in the reverse direction from the real movements. This negative effect was manifest in every prolonged stimulation period in intermittent rotation. Negative reactions or responses to perception of motion in the wrong direction increased in movement under three conditions: (1) when the acceleration of oscillation was reduced to near-threshold values and below; (2) when the stimulation period continued long enough; and (3) when the interval between recurring stimuli approached the absolute refractory period.—*S. Renshaw* (Ohio State).

2213. Travis, B. C. Vestibular sensitivity to intermittent passive rotation of the body. *Psychol. Monog.*, 1928, 39, 78-91.—Correct perception of the direction of motion varies directly with acceleration of the canals when the interval between rotations and the duration are constant. When acceleration is constant correct perception varies inversely with interval and duration. When acceleration and duration are constant, correct perception varies directly as the interval. A more intense stimulus to the vestibular system completely inhibits a later less intense stimulus, but a less intense stimulus has no significant effect on a more intense stimulus. Sensitivity to rotation to the right is greater than sensitivity to rotation to the left in both subjects.—*C. W. Bray* (Princeton).

2214. Wang, G.-H., & Richter, C. P. Action currents from the pad of the cat's foot produced by stimulation of the tuber cinereum. *Chinese J. Physiol.*, 1928, 2, 279-284.—Stimulation of the tuber cinereum gives rise to the "galvanic skin reflex." Section of the mid-brain, or of the sympathetic to the foot from which the reflex is led off prevents the reflex, while stimulation of the cut peripheral end of the sympathetic induces it.—*C. Landis* (Behavior Research Fund).

[See also abstracts 2155, 2160, 2167, 2180, 2232, 2250, 2255, 2277, 2287, 2330, 2331, 2345, 2347, 2411, 2434.]

PLANT AND ANIMAL BEHAVIOR.

2215. Bose, J. C. The nervous impulse in plants. *Scientia*, 1929, 45, 25-30.—By means of what he calls a "resonant recorder," the author has been able to determine that *Mimosa* is sensitive to an electric shock of one tenth the intensity necessary to stimulate human sensation; that the impulse is transmitted both upward and downward; that polarity exists and electrotonic block can be produced in *Mimosa*; that a nerve tissue can be isolated and parts of it stimulated to produce contraction in corresponding leaf parts. The author considers the peculiar sensitivity of *Mimosa* as a protective reaction.—*R. G. Sherwood* (Stillwater, Minn.).

2216. Boulenger, E. G. Animal mysteries. New York: Macaulay, 1929. Pp. 214. \$3.00.—The author, director of the London Zoo, tells in a popular manner many incidents of a mysterious nature occurring among animals, e.g., animal migrations, longevity, freaks and their origin, music among animals, weather prophecy, sea serpents, etc. The book is illustrated by 24 photos and drawings of animals.—*N. L. Munn* (Clark).

2217. Cohen, L. H. The relationship between refractory phase and negative adaptation in reflex response. I. *J. Comp. Psychol.*, 1929, 9, 1-16.—Eight male guinea pigs, in 4 groups of 2 each, when submitted in 200 trials in 20 consecutive days to two sudden noise stimuli, the second occurring 1, 2, 3 and 4 seconds after the first within the relative refractory period, evince a pronounced tendency to complete negative adaptation to the components of the body-reflex. The amount and rate of such negative adaptation was greatest in the first 40 trials. For the two responses in each trial the animals showed great individual differences in the amount and rate of negative adaptation of each response. Supernormal phase stimuli were least provocative of the adaptation. Apparently there are individual differences in the length of the relative refractory phase of a given reflex. The earlier the second noise stimulus comes after the first, the less effective both are in causing negative adaptation; and conversely, the later it comes, the more effective they are.—*H. R. Crosland* (Oregon).

2218. Dennis, W. Observations on two responses of the white rat. *J. Genet. Psychol.*, 1928, 35, 626-627.—Responses of nest mates to the squeals of a

rat whose tail is pinched, and the stealing by one mother of young born to another on the same day as her own litter, are described.—*J. F. Dashiell* (North Carolina).

2219. **Fields, P. E.** The white rats' use of visual stimuli in the discrimination of geometrical figures. *J. Comp. Psychol.*, 1929, 9, 107-122.—85% of all geometrical figure problems were accurately discriminated by white rats with the aid solely of vision. Check experiments ruled out smell and the cutaneous and kinesthetic senses. Light areas on the floor and sides of the apparatus were not influential in determining the rats' choices. It is undetermined whether it was mass of light or a point or a line the animals were reacting to, but they did react to visual form cues.—*H. R. Crosland* (Oregon).

2220. **Friedman, H.** Social parasitism in birds. *Quar. Rev. Biol.*, 1928, 4, 554-569.—Species of birds which neither build their nests, care for their eggs nor their young are discussed. For some period after the time of Aristotle the cuckoo was thought to be the only bird with these characteristics. Later observations included five widely separated and distantly related families: cuckoos (Cuculidae), hang-nests (Icteridae), weaverbirds (Ploceidae), honey-guides (Indicatoridae), and ducks (Anatidae). Evidence is presented concerning the breeding habits of the cowbird; the establishment of individual "breeding areas" and the desertion of these areas as well as the influence of population on the size of the breeding places. Leading theories of the formation of the parasitic habit are mentioned. (1) The source of the habit is sought in the polyandrous condition which all birds are supposed to exhibit; (2) "lack of attunement of the egg-laying and nest building instincts"; (3) the habit has been acquired in a number of ways, e.g., some birds are very sensitive to ovarian stimulus produced by sight of nest with eggs resembling their own. The evidence, according to the writer, points to the fact that parasitism is an acquired habit and not an original one. The "host specificity" in the European cuckoo is indicated by the laying of eggs by single birds in nests of a single species. Different cuckoos of the same species will pick out different kinds of nests, but will always lay eggs in nests of the same species. The bibliography lists 50 titles.—*H. S. Oberly* (Pennsylvania).

2221. **Gudger, E. W.** Some instances of supposed sympathy among fishes. *Scient. Mo.*, 1929, 28, 266-271.—*J. F. Dashiell* (North Carolina).

2222. **Kohts, N.** Adaptive motor habits of *Macacus rhesus* under experimental conditions: a contribution to the problem of "labor processes" of monkeys. Moscow: Museum Darwinianum, 1928. Pp. 368. 7 rub., 50 kop.—The paper is based upon the behavior of one sexually mature and semi-tame monkey in a variety of problem-box situations. The apparatus consisted of a box large enough for the monkey to work within it, if necessary. The front of the box was so constructed that it could be removed and replaced by other fronts, each possessing different locking devices. The door in each front was hinged vertically, and did not open of itself

when unlocked. 60 different unit devices and 33 combinations of these were used. Only two proved insoluble, one a tightly inserted hook and the other a padlock with the key inserted. Food, and, in some cases, food and freedom were used as reward. Training was given on the unit devices before these were presented in combinations. Detailed stenographic notes and time measurements were taken. In some instances the experimenter operated the locks in front of the monkey. The results of the entire paper show: the speed of work on various devices, the time required for different manual movements; the essential absence of imitating; the relatively long retention (180 days) of the essentials of the various habits; the very high percentage of wasteful movements even in the final stages of training with combinations of devices; the inability of the subject to utilize vision in determining when the door is unlocked; and that the period of greatest difficulty, as measured by time per trial, occurs in the beginning with unit devices, and almost in the middle of training with combinations. The author believes that the monkey has regressed rather than progressed to its present status. (The paper concludes with an English summary of 27 pages.)—*W. S. Hunter* (Clark).

2223. **Lashley, K. S., & Ball, J.** Spinal conduction and kinesthetic sensitivity in the maze habit. *J. Comp. Psychol.*, 1929, 9, 71-105.—Rats having serious sensory disturbances, induced by sectioning of the upper cervical region of the cord with consequent interruption of the dorsal, lateral, and ventral funiculi, can still run the maze. Control experiments, while not suggesting the falling back upon exteroceptive cues, suggest that the behavior is not referable to the remaining proprioceptive sensitivity, but rather to intra-neural mechanisms capable of producing an integrated sequence of movements in the absence of directive sensory cues.—*H. R. Crosland* (Oregon).

2224. **Minderhoud, A.** Onderzoekingen over de wijze, waarop de honingbij haar voedsel verzamelt. (Studies on the methods by which the honey-bee gathers its food.) Wageningen: Veenman, 1929. Pp. 94.—A doctoral thesis in the Landbouwhoogeschool at Wageningen, near which place (terrain described in detail) the investigations were carried out. A normal colony was observed by means of a glass hive; the experimental groups were marked and observed by means of a runway partly obstructed with rubber threads, and by means of a series of Petri dishes for liquids. The season bore a marked relation to the activities of the pollen- and nectar-carriers; the flight times (and probably the distances traversed) became longer as the season advanced, and the tendency for each bee to confine itself to one species of plant became more pronounced. The water-carriers were very limited in the area from which they drew their burdens, and could with difficulty reorient themselves to changes of source larger than 1 m. The author is satisfied that the behavior of his experimental group was not greatly affected by the marks he placed upon them. He found that the behavior of both water-carriers and food-carriers could be easily modified, but that the environ-

ment effective in determining the selection of food sources was very limited after the first selection; the first selection is still a problem, but seems to be related to the "dance" performed by returning workers. Observation of a normal colony indicated that many bees have difficulty in finding food plants. Footnote references to the literature are frequent, particularly to the work of von Frisch and his group.—R. R. Willoughby (Clark).

2225. Rau, P. Experimental studies in the homing of carpenter and mining bees. *J. Comp. Psychol.*, 1929, 9, 35-70.—Ten marked bees were taken $\frac{1}{2}$ mile north of home; in times varying from 15 minutes to 26 hours, every one returned home. Again 11 marked bees were taken 2 miles south of their home, and every one returned home in times from 45 minutes to $32\frac{1}{2}$ hours. Again 17 marked bees were taken $2\frac{3}{4}$ miles south from home, with, however, the old landmarks to guide them (a railroad track); 15 of these returned home in intervals from 2 $\frac{1}{12}$ to 33 $\frac{1}{3}$ hours. In a fourth experiment, 32 females were taken west, $1\frac{3}{4}$ miles, with no familiar guiding landmarks to aid them; 26 of these successfully returned home, the intervals ranging from 2 hours to 49 hours. Five other experiments of similar nature were conducted, with much the same results. It is suggested that vision guides the bee's flight.—H. R. Crosland (Oregon).

2226. Stone, C. P. The age factor in animal learning: I. Rats in the problem box and the maze. *Genet. Psychol. Monog.*, 1929, 5, 1-130.—The author reports experimental studies of the learning rates of rats of different ages. Comparable age groups were trained at ages beginning with late infancy, 25 days, at various stages of adult development, and at the beginning of senescence, 2 years or over. Simple and complex problem boxes were used in the first and second series of experiments; while a relatively simple and a moderately complex maze were used in two additional experiments. From the simple problem box the younger rats escaped more quickly than did the adult and senescent groups. However, there was much overlapping of individual performances of the various age groups. Toward the end of 20 trials there was general confluence of all the learning curves. It is believed that the early superiority of the younger groups results primarily from their greater activity and the rise of a conflicting habit on the part of more of the old than of the young individuals. No unequivocal evidence of greater fundamental learning ability of young than of adult or senescent animals was revealed by this experiment. The complex problem box again showed that on the average the young rats were more active than the adults. Neither group showed itself to be clearly superior to the other in the matter of manipulating the apparatus in order to escape. In learning the true pathway in a box-like maze in which the chief point of difficulty consisted of learning when to make a turn of direction rather than the direction of the turn, the adult and senescent rats were superior to the young animals in both time and errors. No consistent difference in the rate of locomotion was found. Young and adults were approximately equal

in error elimination and rate of locomotion in a moderately difficult, multiple-T maze. In general the results of the four experiments indicate that the learning ability of young animals is approximately equal to that of the adult and early senescent animals and that there is no deterioration of learning ability as measured by the problem boxes and mazes here used from early adulthood to early senescence.—L. M. Harden (Clark).

2227. Stone, C. P. The reliability of rat learning scores obtained from a modified Carr maze. *J. Genet. Psychol.*, 1928, 35, 507-521.—Coefficients of reliability for scores in a Carr maze equipped with doors, derived from experimentation upon 375 white rats, were determined from comparison of errors made in odd versus even trials, half versus half of trials, and segment versus segment of trials, and from comparison of time scores in odd versus even, and segment versus segment. Coefficients based on error scores ranged from 0 to .87, those based on time scores from 0 to .93; and it is concluded that this maze, although satisfactory for the training of elementary students, is not to be highly recommended as an instrument for research.—J. F. Dashiell (North Carolina).

2228. Swartz, R. D. Modification of behavior in earthworms. *J. Comp. Psychol.*, 1929, 9, 17-33.—An earthworm, *Helodrilus caliginosus*, in 5,790 trials, chooses the left or the right turn of a Y tube in a 50:50 ratio, but the frequency of the turns in either direction can be reduced by electric shock. Apparently this worm forms an acquired turning reaction similar to that of habit formation, the association and retention involved indicating some degree of intelligence. Individual worms varied in the choosing of right and left turns, both with and without electrical stimulation. No conclusions, because of widely varying behavior, were forthcoming in 5,400 trials without and 3,507 trials with shocks, from *H. parvus* and *H. foetidus*.—H. R. Crosland (Oregon).

2229. Warden, C. J. The development of modern comparative psychology. *Quar. Rev. Biol.*, 1928, 4, 486-522.—The topic is introduced with a brief statement of the interest in comparative psychology from the time of Aristotle to the Darwinian period. The author discusses the influence of Darwin on the renewed interest in this particular field, and the effect on modern comparative psychology. The contributions of investigators from 1859 to 1890 are considered and referred to as the "anecdotal" period. The cause for this movement and the results of these observations are discussed. The swing from the "anecdotal" to the "experimental" interest is presented, covering the period from 1890 to the present. As in the preceding decades, the works of investigators are cited and early methods described. The establishment of the early laboratories for animal research in America is described and a résumé of the contributions during this period is made. The photographs of 18 of the more important investigators constitute an interesting feature of the article. Drawings of early apparatus used by Lubbock and photographs of four of Thorndike's prob-

lem boxes are shown, and the experiments briefly described. The bibliography of 261 titles is distributed under the headings (1) general, (2) "anecdotal" period, and (3) "experimental" period.—H. S. Oberly (Pennsylvania).

[See also abstracts 2141, 2143, 2177, 2195, 2196, 2200.]

EVOLUTION AND HEREDITY

2230. [Anon.] **Eugenics in the Netherlands.** *Eug. News*, 1929, 14, 21-22.—Activities of the Dutch committee on heredity of man and eugenics are described.—B. S. Burks (Stanford).

2231. Burks, B. S. **Note on Professor Freeman's discussion of the Stanford study of foster children.** *J. Educ. Psychol.*, 1929, 20, 98-101.—It is pointed out that Professor Freeman has misread the data on the occupational status of the true mothers of the foster group used in the Stanford study; and that he has erred in estimating from the data the relative contributions of heredity and environment.—J. A. McGeoch (Arkansas).

2232. Chamberlain, H. D. **The inheritance of left-handedness.** *J. Hered.*, 1928, 19, 557-559.—In 55 families in which the mother was left-handed, 13.77% of the offspring were left-handed. In 82 families in which the father was left-handed 9.7% of the offspring were left-handed. In 33 families in which both parents were left-handed 46% of the offspring were left-handed.—B. S. Burks (Stanford).

2233. Davenport, C. B. **Evidence of disharmony in negro-white crosses.** (Proceedings of the Galton Society.) *Eug. News*, 1929, 14, 26-28.—On the whole the scores on psychological tests of negro-white hybrids are intermediate between those of full negroes and full whites, but there is a larger proportion of hybrids who receive the lowest score than even of the negroes. The number of cases upon which the conclusions are based is not large.—B. S. Burks (Stanford).

2234. Frank, J. **Challenging contrasts in recent biography.** *Child Stud.*, 1929, 6, 149-151.—A report of a study group discussion of relative effects of heredity and environment, as shown by unorthodox developments in the lives of Eddie Cantor and of "Boss" Tweed.—M. P. Montgomery (Faribault, Minn.).

2235. Gruenberg, B. C. **Making the most of heredity.** *Child Stud.*, 1929, 6, 146-148; 163.—An individual inherits the capacity to become modified, not only by what the environment does to him, but also by what he does in his reaction to the environment. The child's inherited capacities set limits to his attainments; but on the other hand it is impossible that the former be developed to the limit, since he cannot be exposed to all conceivable types of environment.—M. P. Montgomery (Faribault, Minn.).

2236. Hare, H. J. H. **Premature whitening of the hair.** *J. Hered.*, 1929, 20, 31-32.—A family tree is reported showing the presence in five generations of premature whitening of the hair. The abnormality

appears to behave as a simple Mendelian dominant.—B. S. Burks (Stanford).

2237. Herrick, C. J. **Heredity, environment—and ethics.** *Child Stud.*, 1929, 6, 143-145.—Since our social heritage is much more easily controlled than is our germinal inheritance, most of our educational efforts are directed toward its modification. If a child is to develop self-control and sympathy he must train the bodily organs that perform these functions. Parents may provide favorable environment, but there can be no mental growth without the cooperation of the child.—M. P. Montgomery (Faribault, Minn.).

2238. Holmes, S. J. **The interplay of heredity and environment.** *Child Stud.*, 1929, 6, 139-141.—The extremists who believe that all behavior is determined by environment and those who maintain that it depends entirely upon inborn qualities are both unsupported by scientific facts. Mathematical measurements of the relative influence of heredity and environment in developing certain traits have shown that neither is independent of the other.—M. P. Montgomery (Faribault, Minn.).

2239. McFadden, J. H. **A further note on the differential IQ's of siblings.** *J. Appl. Psychol.*, 1929, 13, 86-91.—Further data to support Arthur's conclusion that "younger children tend to have higher IQ's than their older siblings." She suggests that the result is due to the changing culture in immigrant homes, as her subjects came largely from immigrant stock. The present results on 264 families (2-6 sibs per family) of native North Carolina stock and of several different strata of society, exhibit the same tendency.—W. L. Valentine (Ohio State).

2240. Pearl, R. **The International Union for the Scientific Investigation of Population Problems.** *Eug. News*, 1929, 14, 18-21.—There is need for world-wide cooperation of scientists from many fields to attack population problems. An International Union has been established for this purpose.—B. S. Burks (Stanford).

2241. Popenoe, P. **Eugenic sterilization in California. 17. Effect of salpingectomy on the sexual life.** *Eugenics*, 1928, 1, 1-8.—No alteration can be demonstrated in the sexual life of patients who have undergone salpingectomy.—B. S. Burks (Stanford).

2242. Sutherland, H. E. G. **The relationship between IQ and size of family.** *J. Educ. Psychol.*, 1929, 20, 81-90.—Two samples, together totalling 30,096, of the children of British miners living under highly homogeneous conditions are studied. Negative correlations of -0.129 and -0.126 between intelligence and size of family are obtained. These correlations are somewhat lower than those found by other investigators with less homogeneous groups. The relationship is slightly higher for girls than for boys. Correlation tables are given.—J. A. McGeoch (Arkansas).

2243. Willoughby, R. R. **What is a genetic stock?** *J. Genet. Psychol.*, 1928, 35, 619-623.—In place of the highly ambiguous term "genetic stock" the author recommends use of the concept "Who is to be considered as related to John Smith?", this to com-

prise those individuals having at least one somatic chromosome in common with him, and, theoretically deduced from the parent-child relationship of one half the number of chromosomes, to include six degrees of removal in ascendent, descendent, and collateral lines.—*J. F. Dashiell* (North Carolina).

2244. Willoughby, R. R. Longevity in a human stock. *J. Genet. Psychol.*, 1928, 35, 624-626.—From a known human stock illustration is offered of the applicability of the author's method (see III: 2243) of deriving a precise measure of the prevalence of a given trait among the relatives of a given individual.—*J. F. Dashiell* (North Carolina).

[See also abstract 2440.]

SPECIAL MENTAL CONDITIONS

2245. Adler, A. The case of Miss R.: the interpretation of a life story. New York: Greenberg, 1929. Pp. 300. \$3.50.—A translation of *Die Technik der Individual-Psychologie*, abstracted III: 1123. The foreword has been expanded into an editor's preface.—*R. R. Willoughby* (Clark).

2246. Allison, L. W. Leonard and Soule experiments in psychical research. Boston: Boston Society for Psychic Research, 1929. Pp. 399.—Mrs. Allison gives a report of her experiments with the following mediums: Mrs. Soule, Mrs. Sanders, Mrs. Brittain, Mr. Peters, Mrs. Leonard and Mrs. Dowden. The reports consist of notes taken during the sittings (with a few omissions), interspersed with explanatory notes and a summary at the end of each sitting in which she evaluates the data given by the medium, as to its probable correctness. The book contains supplementary material by the Research Officer of the Boston Society for Psychic Research.—*K. W. Oberlin* (Harvard).

2247. Antoni, N. Svenska foreningens for invarðes medicin förhandlingar. (Proceedings of the Swedish society for internal medicine.) *Svenska läkart.*, 1929, 26, 258-267.—A lecture by E. Sahlgren on hypnosis and the secretion of urine is reported. Experiments were conducted to determine the amounts of urine secreted under hypnosis with suggestion as compared to the amount secreted when suggestion was not employed. Two curves illustrate the result that the amount of urine is materially increased under suggestion.—*M. L. Reymert* (Wittenberg).

2248. Bardorff, W. Ludwig Klages und das Problem des Unbewussten. (Ludwig Klages and the problem of the unconscious.) *Neue deutsche Schule*, 1928, 2, 839-846.—According to Klages the structure of character is three-dimensional, referring to (1) the matter (dispositions, etc., of the intelligence, will and feeling), (2) the formation (the "sum-total" of the instincts or motivating forces), (3) the strata that determine the forms of the psychic processes.—*A. Römer* (Leipzig).

2249. Baudouin, Ch. La régression et les phénomènes de recul en psychologie. (Regression and recoil phenomena in psychology.) *J. de psychol.*, 1928, 25, 795-823.—The author believes that there

are certain regression phenomena which should be differentiated one from the other on the basis of their special characteristics. The typical regression phenomena are regrets, "evolutive" regressions, and introversions. A schema calculated to show the relation existing between these phenomena is presented. This schema is based on the concept of "the reactive are" *en rapport* with three sources of energy derived respectively from present stimulation, experience accumulated during individual existence, and the stage of evolutionary development. Those "recoils" related to the "reactive are" and present stimulation are introversions, those related to past experience and the former are regrets, while those related to evolution are regressions in the pathological sense. The author also presents the idea of a "retreat tendency" as the opposite of the "combative instinct" of Bovet. A number of case studies are given.—*N. L. Munn* (Clark).

2250. Bensch, I. Zur Psychologie des Gedankenlesens. (The psychology of thought-reading.) *Neue psychol. Stud.*, 1929, 5, 67-110.—Objective records were made of slight physical changes which might serve as the perceptible basis of thought-reading. The subject was told to think of a number from 1 to 10 and then E named aloud the digits. Plethysmographic and pneumographic records were taken, as well as kymographic records of hand movements and a record of the psychogalvanic reflex. At the same time E made a (subjective) judgment as to the number chosen. In each case the majority of the records showed a perceptible fluctuation for the number which had been chosen. The correlation between the cheirograms and pneumograms was +.22, between the cheirograms and plethysmograms, —.22, and between the plethysmograms and pneumograms, +.92. The *r*'s between the free observations and the records were .91, .70, and .85 respectively. A discussion of thought-reading in the light of these experimental results brings out the fact that the free observations are correct approximately 1/5 again as often as the unambiguous objective records, which suggests the use of other cues than the one which is presumably being observed. Such observation is suggested as the perceptible basis of thought-reading, and no guess is hazarded as to the supra-perceptible bases.—*D. E. Johannsen* (Clark).

2251. Bonaparte, M. Der Fall Lefebvre. Zur Psychoanalyse einer Mörderin. (The Lefebvre case. Psychoanalysis of a murderess.) *Imago*, 1929, 15, 15-62.—The case is fully considered under these subtitles: the facts about this murder of a pregnant daughter-in-law; the process in court; the meaning of the deed in connection with the Oedipus complex and the resentment felt in childhood at the birth of a younger sister; the form of the deed; the hypochondriacal psychosis of a querulant delusional type with an ego-centric fight for the right; the legal punishment and determinism, with the conclusion that the scientific viewpoint would replace the punishment of criminals by their detention and prevention from doing harm.—*C. Moxon* (San Francisco).

2252. Brownell, H. C. Mental make-up as related to susceptibility to illness. *Amer. Med.*, 1929,

24, 99-102.—Colgate psychoneurotic and introvert tests, and intelligence tests, were administered to 165 Skidmore College girls and 100 Colgate men with a view to studying the relation between mental constitution and "autonomic constitution" as expressed indirectly by illness complaints. Personal health questionnaire scores gave a variability of from zero to 42. For the total group of women, a correlation of .57 was obtained between psychoneurotic and illness scores and .37 between introvert and illness scores. The correlation for the group of men was .49 between psychoneurotic and illness scores and .35 between introvert and illness scores. No relation was found between intelligence test scores and illness.—J. B. Stroud (Chicago).

2253. Glaze, J. A. Psychological effects of fasting. *Amer. J. Psychol.*, 1928, 40, 236-253.—Three adults went without food from 10 to 33 days. Tests of several varieties were made at regular intervals before, during, and following the fasting periods. The tests were tests in arithmetic, writing, color naming, backward reading, steadiness, visual acuity, and equilibrium. The conclusions reached as a result of this experiment are as follows: (1) The so-called mental output is generally decreased during a long fast. (2) A fast of more than a week's duration definitely increases steadiness of hand. (3) A subject fatigues more rapidly during a fast than normally, when the task is of considerable length and homogeneity. (4) Performance at some tasks after a long fast is much more efficient than normally, an effect which can hardly be attributed to practice alone. (5) In casual observations it was noticed that the smell sensitivity is greatly increased during a long fast; and that sex feelings in males are considerably accentuated when eating is resumed after a long fast.—R. Stone (Clark).

2254. Hermann, I. Das Ich und das Denken. (The ego and thought.) *Imago*, 1929, 15, 89-110.—Hermann concludes that logical thought is a function of the ego-super-ego relation and that this relation in certain cases can be objectified. Foundation stones of logical thought as far as their form is concerned ("concept," "all") have been formed from the constellation of social life, and ultimately through the institution of totemism.—C. Moron (San Francisco).

2255. Jacoby, H. Handschrift und Sexualität. (Handwriting and Sexuality.) Berlin: Verlag: Der Syndikalist, 1928. Pp. 38. Rm. 0.60.—This study, which has 45 graphological illustrations, tries to enrich the science of sex through graphology, that is, the theory of the expressive content of handwriting. In the analysis of a number of graphological examples the author makes use not only of the scientific method (Ludwig Klages, Georg Meyer) but also of the intuitive, "visionary," "psychographological" method which seems to him more fruitful in many cases. In clear examples of handwriting he shows the graphological expression of the sensuality of children, of puberty, abstinence, hysteria, frigidity, repression, sexual incontinence, nymphomania, venereal diseases, sublimated sexual-

ity, homosexuality, lesbian disposition and transvestitism. He treats of the relations between sexuality and crime, sexuality and marriage, sexuality and eugenics, graphology and psychoanalysis. The results of his investigation of handwriting correlate with the conclusions of scientific sex knowledge. On the basis of this, the author is convinced of the necessity of cooperation between graphology and the science of sex. His book, *Handwriting and Sexuality*, shows the possibility of this.—H. Jacoby (Berlin-Charlottenburg).

2256. Janet, P. Fear of action as an essential element in the sentiment of melancholia. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 297-309.—The histories of patients suffering from fear of action in an exaggerated form are studied in view of the light they shed on the normal individual. True melancholia is a disease, but sadness in its most simple form is identical with melancholia and contains the same fear of action. Sadness is always a sign of weakness and sometimes of living weakly.—C. Landis (Behavior Research Fund).

2257. Klages, L. Die Grundlagen der Charakterkunde. (The elements of characterology.) (5-6 ed.) Leipzig: Barth, 1928. M. 8, Lw. 10.—According to the author, the theory of the soul is to be primarily considered as morphology or physiognomy; a theory of form, as it were, of the psychic structure. The second and third chapter deal with the "conditions of essence determination," of "problems and methods" of character investigation. The cognition and judgment of other characters is based, in the last analysis, on one's capacity for abstracting introspection. We interpret the character of the other self by means of his expressions and movements which we interpret on the basis of our own impulses. These are occasioned by perception and the effects on us of the images and characters which we experience. The stronger the capacity for self experience, and the more pronounced the gift of memory of the most delicate experiential overtones, and the more keen the capacity of objectifying one's visual experiences, the more complete will be the achievement of the investigator of the soul and character. The part only differentiates itself from the whole as a changing aspect which remains in an indissoluble relation to all the other parts. It is in this sense that we must understand the division of character, which Klages uses as the foundation of his special characterology (Chapter 4) into *matter, formation and structure*. *Matter* is composed of mass-characteristics or capacities and endowments such as memory, the capacity to remember, impressionability and the perceptive tendencies. The special *formation* is determined by directional attributes or impulses to evaluate matter (urges or instincts with a feeling tone). The *structure* becomes clear in relational attributes, such as the excitability of expression (temperament) and of the will. (Chapters 5 to 7.) The relation between the drive to express oneself and the capacity to express oneself leads (Chapter 8) to the most important kind of

mental disturbance, hysteria. Klages gives to this term a more comprehensive meaning than do the medical men, and regards as its main characteristic the impotence of creative power with an undiminished urge for expression. According to the strength of the cooperating will, the result will be repressed expression, tense over-expression or false expression. The ninth chapter leads us to the final causes of personality difference. They are to be found in the incompatible contrast of the two fundamental centers of the personality—mind and spirit. The spirit, the basis of all life, is in a polar relation with the body, as *meaning* of the phenomenon which is revealed in the physical. Into this life-context mind, as ultimately of acosmic origin, and in the course of the phenomena makes a constant focus on the basis of its own space-time independence. The ego which finds itself in self-consciousness is the point of rest which is united with the body. And when it gains strength it obtains more and more dominance over the soul as that second center of the mind with its wholly unique demands, drives and aims, on the basis of which we can speak of personality in the true sense of the word. This contrast must form the foremost principle of character classification, and in the tenth and last chapter Klages develops from it the entire widely branched system of drives. The poles are formed by the two extreme cases in which the individual is either directed exclusively toward life (the psychic condition of the primitive); or is turned wholly toward the mind (the ideal of the Middle Ages). The working of the mind is characterized by its constant activity and a *binding* force which attempts to objectivate itself, as well as the environmental phenomena and subject the latter to its unbending will. The character of the ever *passive* soul, on the other hand, is an inborn trait of an opposite nature. It always tries to loosen the bonds of the mind and to lead the soul back again to freedom, depth of reality, joyous imagery and the unifying love of life. The new edition adds to the perceptive tendencies in Chapter 6 the contrast of the types which are near to and remote from perception, as well as the delineation of the formalistic type.—*M. Ninck* (Riehen bei Basel).

2258. Klemm, O. *Dunkles beim Hellsehen*. (Obscurity in clairvoyance.) *Neue psychol. Stud.*, 1929, 5, 135-142.—An investigation of the ability of 10 clairvoyants to report the circumstances of certain criminal occurrences resulted in no case in answers which could have been used to locate the criminal. The two possibilities of explanation of clairvoyance are discussed, and although transcendental knowledge is not completely discarded, it is pointed out that experimental evidence is strongly against it.—*D. E. Johannsen* (Clark).

2259. Kulovesi, Y. *Zur Entstehung des Tics*. (The origin of the tic.) *Int. Zsch. f. Psychoanal.*, 1929, 15, 82-95.—Case of a girl with muscular twichings of face, neck and shoulders, and a compulsive desire to cry, removed by analysis. The tic represented the muscular reflex of crying; the cry-

ing corresponded to the fixation on the traumatic "primal scene" of the parental intercourse. The pattern of the gesture of dissatisfaction was formed at the suckling phase. Her intense infantilism made this patient hypersensitive to narcissistic insults and injuries.—*C. Moxon* (San Francisco).

2260. Mahr, G. *Evangelische Seelsorge und Psychoanalyse*. (Evangelical spiritual help and psychoanalysis.) *Auswirkungen der Psychoanalyse in Wissenschaft und Leben*, 1928, 334-349.—To consider the stratification of the unconscious is as essential as to pay attention to conflicts.—*A. Römer* (Leipzig).

2261. Money-Kyrle, R. *Morals and super-men (some ethical problems from the psycho-analytical standpoint)*. *Brit. J. Med. Psychol.*, 1928, 8, 277-284.—Morals are defined as "the totality of human inhibitions." Inhibitions are both conscious and unconscious. The former consist of those based upon rational fear, as of being imprisoned, those based upon irrational fear due to ignorance as of hell, and accepted by the ego. The latter are those of the super-ego which were conscious in childhood but have been forgotten; they may originally have been either based on fear or accepted by the ego. The inhibitions of the super-ego may become conscious by means of analysis. The unconscious inhibitions are the cause of both neurosis and perversion. The neurosis is an inhibition at a pre-genital level, while a perversion is an inhibition at a genital level. Between these stages and the normal are the individuals with a neurotic or pervert character. The neurotic tends to be incompetent and the pervert to be criminal. The rarely found normal individual will have no genital inhibitions, but only conscious inhibitions based on rational fear and imitation of accepted heroes. The normal type can be developed through knowledge of the world (enlightenment) and knowledge of the self (psychoanalysis). If this education is begun in the child the development of inhibitions may be prevented. Enlightenment alone is dangerous; analysis alone is beneficial, but a combination of the two will produce the best results. The author concludes with the question, "Will enlightenment destroy society before analysis has had time to save it?"—*M. B. Mitchell* (Radcliffe).

2262. Mullen, J. J. *Psychological factors in the pastoral treatment of scruples*. *Cath. Univ. Amer. Stud. Psychol. & Psychiat.*, 1927, 1, No. 3. Pp. 165.—Scrupulosity is clinically referred to Janet's psychasthenia, being identified with those morbid fears, obsessions, and excessive anxiety and doubting as have some moral implications or involve experiences of a religious nature. In chapters on "Obsessions and Their Symptoms" and "Phobias" the rôle played by these two clinical entities in scrupulosity is pointed out. A questionnaire dealing with common fears, school timidity, and situations in which scrupulosity develops was given to 400 students in a girls' private high school. Conclusions based on the study principally deal with the prevalence of scruples in high schools of this kind. Analytical discussions are given of the scrupulosity of three important characters in religious history. In the sec-

tion on methods of treatment the explanations and methods of Freud and Janet are reviewed and objections made. The author suggests as the best method for the treatment of scrupulosity a combination of rational persuasion and re-education aided by psychological analysis.—C. W. Brown (Chicago).

2263. Nachmanson, M. *Hysterie infolge Verdrängung ethischer Regungen.* (Hysteria resulting from the repression of ethical impulses.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 95-100.—The author claims, on the basis of case material which has come under his observation, that the usual Freudian situation in which hysteria results from repression of the libido by the super-ego can be reversed. The cases in question yielded to analysis only when it was discovered that ethical factors in the patients' personalities had been repressed in favor of the free expression of sexual impulses. The author sees in this situation a culture problem of some importance. At the time Freud announced his original doctrine, all social forces coordinated in the repression of the libido. At the present time strong social forces favor the emancipation of the libido, but in most people of the present generation traces of the old ethical standards are still a dynamic factor.—M. N. Crook (Clark).

2264. Prinzhorn, H. [Ed.] *Auswirkungen der Psychoanalyse in Wissenschaft und Leben.* (The effects of psychoanalysis in science and life.) Leipzig: Neue Geist Verlag, 1928. Pp. 412. M. 18, Lw. 22.50.—This volume combines 22 studies by outstanding specialists and experts from all fields. The editor states in his introduction: The aim of this collection is to review the fundamental ideas of the psychoanalytical theories, to attest to their stimulating influence and to delimit their sphere of application. None of the contributors is a professional analyst. On the other hand not one of them had to make a more detailed study of psychoanalysis for the purpose of this work. Each contributor stands primarily for his specialty and receives the law of his scientific thinking from it. To each of them the stimulation of psychoanalysis came "from outside" and had to be tested on research material with which they were acquainted. This eliminates the objection that psychoanalytical forms of thought and standards were applied in a field of science which was not completely mastered by the investigator and thus used in a questionable manner. One can say, therefore, that this book offers a *second refraction of psychoanalysis in science and life*. Clarity is to be brought to the following questions of the psychoanalytical theory which up to now have been very difficult to survey: (1) What important findings, interpretations and ideas has Freud given to us as a permanent mental possession? (2) What effects have these insights and concepts in the humanities? (3) What is the practical significance of this breaking up and maturing of humanity by means of psychoanalysis? It seems the time has come where we must decide which is stronger: the new theory of man which is substantiated from all sides and in which psychoanalysis is one method and

theory among others of relative validity, or the one-sided psychoanalytical doctrine of man which makes a single direction of thought absolute?—H. Prinzhorn (Frankfurt a.M.).

2265. Reik, T. *Zur Psychoanalyse des jüdischen Witzes.* (Psychoanalysis of Jewish wit.) *Imago*, 1929, 15, 63-88.—When we investigate the special features of Jewish wit, its cruel and shameless self-abasement and exhibition of the Jews' own weaknesses and mistakes, we surmise that psychic factors have been at work similar to those that cause melancholy and make it pass into mania. Having lost the ideals of national existence, and being unable to take revenge upon their oppressors, the Jews have tended (the tendency seems less today) to introject the object of hate and to enjoy the expression of witty malice and verbal revenge against the enemy in the self.—C. Moxon (San Francisco).

2266. Rosenow, C. *Meaningful behavior in hypnosis.* *Amer. J. Psychol.*, 1929, 40, 205-235.—The phenomena of hypnosis are results of the meaningful behavior of the individual in ways which the individual does not understand. The meaning characteristic of all forms of hypnotic behavior is meaning to cooperate with the hypnotizer. This article consists of an exposition of the concrete detail without which these generalizations are vague and useless. The author attempts to explain only what he has observed, not what he has read.—R. Stone (Clark).

2267. Sachs, H. *Kunst und Persönlichkeit.* (Art and personality.) *Imago*, 1929, 15, 1-14.—The day dreamer gets relief for his bad conscience when he gives his fantasies a form that his hearers must admit to be also an expression of their wishes. The day dreamer becomes an artist when he is satisfied to have his work admired in place of himself. The artist, unlike the leader, is inwardly bound to his group. His art therefore takes the leadership rôle that he himself cannot fill. Not all artists are able to express their own personality in their work. The "impersonal" art expresses the striving to wipe out the ego, and gets a response from the instinct for destruction in the person who enjoys it.—C. Moxon (San Francisco).

2268. Sadger, J. *Zur Frage des gemeinsamen Sterbens (Doppelselbstmord).* (The question of common death (double suicide).) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 65-72.—The case is described of a female patient 43 years old who had, during a number of years, experienced a wish to participate in a double suicide. The patient thought first of her mother as the other party, then of various people of her own sex and even of the opposite sex. The author attributes the genesis of the wish to an incest complex. The case has much in common with one the author described in 1910. The clinical picture agrees in general with that described by Ernest Jones in 1911 and 1912, but the present case does not show coprophilia, necrophilia, or sadism.—M. N. Crook (Clark).

2269. Schmidt, W. *Prof. Dr. Freud's psychoanalytische Theorie zum Ursprung der Familie*

und der Religion. (Freud's psychoanalytical theory of the origin of the family and of religion.) *Schönere Zukunft*, 1928, 4, 263-265.—The writer tests the ethnological bases of this theory. Thus "no scholar of any significance still holds," for instance, Smith's theory which Freud utilizes. Modern science is a "death blow" to Freud's hypothesis.—A. Römer (Leipzig).

2270. Schwab, G. **Hysterie in Kindesalter und ihre Behandlung.** (Hysteria in childhood and its treatment.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 72-88.—Two cases of severe hysteria are described, one in a girl 5½ years old and the other in a boy of 14. The girl showed difficulty in walking and extreme helplessness in the ordinary operations of dressing, eating, and playing. The symptoms were aggravated by an over-solicitous mother. The boy showed a complex of symptoms which developed after an attack of the grip. General motor incapacity confined him to bed. He refused to open his eyes, and when compelled to do so refused to speak for four months. Occasional hemorrhages were eventually found to have been induced by deliberate abrasion of the mucous membrane of the nose. Inactivity and refusal to take sufficient nourishment led to a marked degree of anemia. Both cases gave the appearance of having an organic genesis, but both recovered in the atmosphere of the clinic within a relatively short time. In the case of the boy the therapy consisted partly in pointing out to him that his trouble sprang from certain social experiences in which his pride had been injured.—M. N. Crook (Clark).

2271. Ternaus, J. **Eine Selbstbezeugung der Psychoanalyse.** (A self-testimony on psychoanalysis.) *Stimmen der Zeit*, 1928, 59, 278-293.—The "whole inner conflict of the Freudian investigations" led the Berlin nerve specialist, Edgar Michaelis, to analyze the Freud-psyche itself (E. Michaelis: *Die Menschheitsproblematik der Freudschen Psychoanalyse*, Leipzig, 1925.) The psychoanalytical theory, according to which the core of our being is to be considered as an instinct-apparatus of incomprehensible and uncontrollable wishes, is itself the "product of an inner conflict."—A. Römer (Leipzig).

2272. Wessely, C. **Das Aramäische in den Visionen Therese Neumanns.** (The Aramaic in the visions of Therese Neumann.) *Leipziger neueste Nachrichten*, 1929, 39, 2.—In the Vienna Leo Society, Wessely emphasized especially that in the case of Therese we have to do with correct Aramaic. And since one had heard the words before Wutz's appearance, the possibility of suggestion could no longer be considered.—A. Römer (Leipzig).

2273. Wietfeldt, H. **Blasphemiezwang. Ein kasuistischer Beitrag.** (A blasphemy compulsion. A casuistic discussion.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 89-95.—The case is described of a countryman who became obsessed with the thought of certain profane phrases. Failing to find other relief he went to the psychiatrist and a short treatment dispelled the obsession. The analysis disclosed that the trouble had its root

in an ambivalent attitude toward the father. The curses were directed against God the Father, who served as a substitute for the personal father. This tendency, however, came into conflict with strong ethical elements in the patient's personality. The author points out that this is one of several cases in which analysis succeeded with uneducated people, the possibility of which is denied by some psychiatrists.—M. N. Crook (Clark).

2274. Zulliger, H. **Elternbeobachtungen über die Sexualität kleiner Kinder.** (Parental observations of the sexuality of small children.) *Imago*, 1929, 15, 111-134.—These records of children's talk are set down, with little attempt at interpretation, as evidence for Freud's theories.—C. Moxon (San Francisco).

[See also abstracts 2159, 2166, 2180, 2241, 2355, 2394, 2403, 2417.]

NERVOUS AND MENTAL DISORDERS

2275. Bibring, E. **Klinische Beiträge zur Paranoiafrage. II. Ein Fall von Organprojektion.** (Clinical contributions to the paranoia question. II. A case of organ projection.) *Int. Zsch. f. Psychoanal.*, 1929, 15, 44-66.—The case of a woman, 37 years old, with delusions of persecution. Behind the male persecutors stands clearly the first and chief persecutor, the mother. In the conflict between homosexual and heterosexual impulses, paranoia represents an attempt at self-defense against the homosexuality by projection. In this case there is a projection of the buttocks. This is due to an over-investment of that region with anal libido and its sexualization.—C. Moxon (San Francisco).

2276. Cornejo, A., Lorente, S., & Caravedo, B. **Legislación sobre asistencia de alienados, toxicomanos y psicopatas.** (Legislation for the aid of the insane, drug-addict, and psychopathic.) *Bol. de Crim.*, 1928, 7, 690-714.—After an historical discussion of the attitudes of the past regarding the treatment of the mentally deficient the author discusses present-day trends in this regard. A plea is made for more adequate facilities in the treatment and prevention of the abnormal case. Unfortunately for the afflicted, their cases do not come under observation, in many cases, until the optimum period for correction is past. The number of cures is inversely proportional to the length of time since the onset of the disorder. The author points out that education of the public and the dissemination of propaganda will go a long way towards establishing a mental prophylaxis. Adequate care and education of abnormal children, the drug addict and the psychopath are advocated. In Peru the only public establishment for the aid of the insane is Magdalena colony, which is under the direction of the Public Aid Society of Lima.—J. W. Nagge (Clark).

2277. Glassburg, J. A. **Is the treatment of speech disorders a medical problem?** *J. Amer. Med. Asso.*, 1929, 92, 958-962.—The treatment of speech disorders is a medical problem which requires the cooperation of the pedagogue, the psychiatrist and

the rhinolaryngologist. Teachers should work under the supervision of a medical director. Speech disorders may be classified under two headings: stuttering and stammering, which are synonymous, and defective phonation. Stuttering or stammering is a spastic coordination neurosis based on mental conflict. Predisposing causes are heredity and a neuropathic constitution. Exciting causes are nervous shock and psychic insult. Aggravating causes are pathological conditions in the mouth, ear, nose and throat. Aphasia, adenoids, abnormalities of the uvula, intranasal obstructions, tongue tie, cleft palate, harelip, and deformities of the jaws and dental arches are causes of defective phonation. In every case of defective phonation a thorough physical examination should be made before corrective measures are instituted. Hoarseness, falsetto voice, retarded speech development, perverted speech, the speech conflict, lisping and nasality are forms of speech disorders based on physical or mental causes which require the attention of the medical specialist in order to overcome the disorder.—*G. J. Rich* (Bellevue Hospital).

2278. **Groom, W. C.** Tuberculosis as an etiological factor in producing neurasthenic symptoms. *Psychiat. Quar.*, 1929, 3, 77-81.—29 cases in which nervous symptoms were found that were thought to have been released by, or to have originated in tuberculosis, are discussed. The most common symptoms complained of were "nervousness," inability to sleep, tendency to worry, feelings of fear, tendency to cry and irritability. As far as could be ascertained, there was no relationship between the severity of the physical symptoms and the severity of the mental symptoms, but it was definitely concluded that tuberculosis frequently produces neurasthenic syndromes.—*E. T. Burr* (Vocational Adjustment Bureau).

2279. **Harris, H.** Mental deficiency and maladjustment. *Brit. J. Med. Psychol.*, 1928, 8, 285-315.—Maladjustment is considered from three angles: biological, psychological, and social. The first is a constant and the other two variables in the equation which gives adjustment or maladjustment. Mental deficiency is defined as subnormal intelligence combined with inadequate social behavior or performance. The biological considerations discussed are plasmic (including true heredity and blastophoria) and somatic (including congenital, natal, and acquired factors). The chief psychological difficulties are those of temperament and character, which at present cannot be adequately tested, but need individual attention. The subnormal person should not be compelled to compete with the normal, for this often causes an anxiety neurosis from a feeling of inadequacy. The social contributions to the production of the mentally defective are failure to give him the right kind of training, and exposure to an environment which exaggerates his emotions. The social methods of treating and controlling the mentally defective consist in providing suitable domicile and permanent work. The methods used for this purpose range from the work of child guidance and educational clinics through parole and colony

to institutional care. Bibliography of 46 titles.—*M. B. Mitchell* (Radcliffe).

2280. **Hinsie, L. E.** The treatment of schizophrenia. *Psychiat. Quar.*, 1929, 3, 5-39.—The psychobiological approach, the pharmacotherapeutic methods and the combination of the two are reported in some detail. Although there are many unsolved problems in schizophrenia, some palpable therapeutic aids that are encouraging in the handling of the disease are described. A comprehensive bibliography is attached.—*E. T. Burr* (Vocational Adjustment Bureau).

2281. **Levin, H. L.** Course in mental hygiene and child guidance for school nurses and dental hygienists. *Psychiat. Quar.*, 1929, 3, 86-89.—The necessity of a knowledge of psychology is stressed. An outline of the course and a bibliography are given.—*E. T. Burr* (Vocational Adjustment Bureau).

2282. **Loevenhart, K. M., Lorenz, W. F., & Waters, R. M.** Cerebral stimulation. *J. Amer. Med. Asso.*, 1929, 92, 880-883.—Sodium cyanide administered intravenously in proper dosage causes cerebral stimulation in the stuporous phase of certain psychoses. An inhaled mixture of carbon dioxide and oxygen is a far better agent for producing such cerebral stimulation. Positive responses were obtained in cases of dementia praecox, manic-depressive insanity, and involuntional melancholia. Patients who have been mute and mentally inaccessible for long periods of time become talkative and accessible, and catatonia passes off. Some carry on conversation. Some patients show a remarkable memory for past occurrences. Others express psychotic delusions. The stimulation lasts for from 2 to 25 minutes, after which the patient returns to exactly the condition in which he was previous to stimulation. The reaction is to be regarded as a true stimulation of parts of the cortex and not the paralysis or removal of an inhibitory mechanism, because the former is a simpler explanation, and because it is known that the same substances stimulate the medulla. The underlying chemical mechanism is probably a decrease in the rate of oxygen absorption by the cells of the cortex. Such chemical procedures profoundly alter cellular function, possibly indicating something very material concerning the nature of the abnormality resident in certain psychotic states. The method of approach in certain stuporous or inaccessible psychotic patients here presented permits a period of contact with the individual which offers opportunities for further physiological and psychological investigations.—*G. J. Rich* (Bellevue Hospital).

2283. **Lyday, J. F.** The place of a mobile clinic in a rural community. *Ment. Hygiene*, 1928, 12, 77-89.—The mobile clinic has excellent possibilities as a method of meeting the needs of the rural districts and smaller communities for psychiatric clinics. The type of organization built up for the experiment in Iowa—a full-time unit with psychiatrist, psychologist, psychiatric social worker and secretary, working under the direction of a psychopathic hospital—offers much that would be of value

in any permanent traveling-clinic service. The details of organization and types of cases treated are discussed.—*G. J. Rich* (Bellevue Hospital).

2284. **Parsons, H. C.** The learned judge and mental defective meet—what then? *Ment. Hygiene*, 1928, 12, 25-37.—The traditional principles of law make no provision for the judge to learn about the mentality of the prisoner whom he is to sentence, nor do they take account of mental deficiency. The provision of probation officers and of court psychiatrists add both to the sources of information available to the judge and to the means of treatment of the offender which are at his command. Both services came as the result of pressure from without and were not movements initiated by the legal profession.—*G. J. Rich* (Bellevue Hospital).

2285. **Pollack, H. M.** State institution population still increasing. *Ment. Hygiene*, 1928, 12, 103-112.—The Federal census of institutions made in 1927 shows a marked increase since 1923 in the populations of institutions for mental disease, institutions for feeble-minded and epileptics, and penal institutions. The burden of mental disease, mental defect and crime borne by the state is continually becoming heavier.—*G. J. Rich* (Bellevue Hospital).

2286. **Rauth, J. W.** Diastatic activity of the blood serum in mental disorders. *Cath. Univ. Amer.; Stud. Psychol. & Psychiat.*, 1926, 1, No. 2. Pp. 32.—The diastatic activity of the blood serum was determined in 141 abnormal cases, principally involuntional depression, dementia praecox and manic-depressive. Marked diastatic activity, above the normal, was noted in only the manic-depressive group. In a number of cases increased diastatic activity was found to correlate with renal deficiency and so the blood diastase was accepted as a valid measure of renal function. The data on diastatic activity indicated that one constitutional factor in manic-depressive psychosis is lowered renal function. A good review of the literature on the diastatic activity of blood serum in health and disease is given. Bibliography of 57 titles.—*C. W. Brown* (Chicago).

2287. **Trumper, M.** A hemato-respiratory study of 101 consecutive cases of stammering. Philadelphia: Univ. of Pennsylvania, 1928. Pp. 72.—Practically one half of the 82 adult stammerers in the 101 cases studied had lowered vital capacities, which were compensated by (1) normal breathing accompanied by periodic deep breaths, or (2) rapid shallow breathing, or (3) a definite increase in the volume per breath. Depth of breathing was found to be inversely proportional to the degree to which vital capacity was below normal. Oxygen want prevails when the lungs expand unevenly due to rapid shallow breathing. Compensation for this lack of oxygen takes place by an increase in the red cell number and volume and the hemoglobin content of the blood. In stammerers there is a fundamental disturbance of the respiratory system, probably of nervous origin, which results in an alteration in cerebral circulation leading to congestion before speech is actually begun. The respiratory center is

particularly sensitive to changes in circulation and to variations in the composition of the blood. There is in addition a periodic respiratory abnormality of chemical origin due to changes in the pressure of oxygen and carbon dioxide supplying the higher cerebral centers. The hematologic concomitant with rapid shallow breathing supports Bleumel's theory of cerebral congestion with resulting transitory amnesia as the explanation of stammering. A bibliography of 162 references on respiration, hematology, and stammering is given.—*G. L. Barclay* (Illinois).

2288. **van Loon, F. H. G.** Protopathic-instinctive phenomena in normal and pathological Malay life. *Brit. J. Med. Psychol.*, 1928, 8, 264-276.—An attempt is made to study basic instinctive racial differences by means of abnormal phenomena. Among the Malays two forms of insanity, "Amuck" and "Latah," are typical instinctive expressions which come out only in mob actions in the more civilized races. In both cases there is an instinctive protopathic reaction to a vague fear or fright, such as is found in the nightmares of a child, with almost total amnesia following the attack. "Amuck" takes the form of violent attacks upon everyone within reach as an instinctive reaction to hallucinatory objects of great fearfulness. "Latah," on the other hand, is characterized by exact and constant imitation of anyone in sight. It is found almost exclusively among Malay women who have served as domestic servants. In more civilized races these instinctive reactions have been repressed or combined in an epieritcal reaction to more definite stimuli.—*M. B. Mitchell* (Radcliffe).

2289. **Young, E. H.** Help for you who stutter. Minneapolis: Hill-Young School, 1928. Pp. x + 142. \$2.00.—The book is intended as a practical guide to the understanding of the difference between the normal use of the speech mechanism and its use during stuttering. The stuttering is often due to the conflict or inhibition which results when an attempt is made to change from the habits of "baby talk" to habits of correct speech. The feeling of inferiority which results from failure of the correct sounds to come forth easily often leads to emotional disturbances which become habitual. The normal movements or positions and correct breathing are explained in some detail. If incorrect habits have been formed, they can be corrected only by understanding what the new habits are to be and then patiently practicing them daily for a period of at least two or three years. A little guidance given a child between the ages of eight months and three years when the speech mechanism first functions will insure the formation of correct habits from the beginning so that the habits of speech will need no changing.—*M. B. Mitchell* (Radcliffe).

2290. **Zillboorg, G.** Schizophrenien nach Entbindungen. (Schizophrenias after child birth.) *Int. Zsch. f. Psychoanal.*, 1929, 15, 67-81.—The postpartum schizophrenias show the effect of a castration complex of the revenge type connected closely with the unbroken Oedipus complex and its regressive

anal consequence, namely father identification. Hence the frigidity or aggressive desire for the incorporation of the penis from unconscious hate, and the wish, after the desired coitus, to rob the husband of his genitals. Consequently the patients show no symptoms of ambivalent feelings to the child during pregnancy, e.g., irritability, vomiting or food phobias. But parturition means for these women reliving their own birth and weaning and infantile sadistic fantasies of castration. Usually the psychosis develops gradually after this parturition trauma has been more than once repeated.—*C. Moxon* (San Francisco).

[See also abstracts 2119, 2145, 2163, 2291, 2292, 2330, 2332, 2384, 2405, 2413, 2447.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

2291. **Bambaren, C., & Prada, L.** *Epilepsia y delincuencia.* (Epilepsy and delinquency.) *Bol. de Crimin.*, 1928, 7, 558-565.—The subject whose case history is discussed in this article was arrested for forgery. The analysis which was made revealed that his heredity was bad. His father was a drunkard and the home life of his parents very unsatisfactory. The prisoner is habituated to alcohol. Epileptic attacks have occurred during the last 8 years. His married life has been marked by frequent quarrels and economic neglect of family. Mental examinations reveal disturbances of normal affective life and of volition. In the latter all of the characteristics of pathological impulsions and aggressiveness are apparent. The delinquent is often arrested for antisocial acts which reach their climaxes during the period of inebriety. All evidence points towards psychopathic drunkenness. It is evident that alcohol is the immediate cause of the epileptic seizures. In practically all delinquency in which alcohol is the immediate cause of anti-social behavior of a violent sort, there is a psychopathic background which is usually epileptic in character.—*J. W. Nagge* (Clark).

2292. **Bowman, K. M.** *Medical and social study of one hundred cases referred by the courts to the Boston Psychopathic Hospital.* *Ment. Hygiene*, 1928, 12, 55-71.—100 cases referred by the courts were critically reviewed after a period of about four years. The results indicate that psychiatry has a definite contribution to make toward the understanding of crime and the disposition of prisoners. In most of the cases, the diagnosis and recommendations appear to have been correct as shown by the situation four years later. Some patients recommended for parole or suspended sentence have gotten into further trouble, but it seems that in certain doubtful cases such a trial is justified. The fact that some cases have done well where the court has disregarded the advice of the hospital demonstrates that the psychiatrist is not infallible.—*G. J. Rich* (Bellevue Hospital).

2293. **Chave, E. J.** *A guide for the cooperative study of the experiences of growing persons. (I). A schedule for guidance in the study of the religious life of an individual.* *Relig. Educ.*, 1929, 24, 150-154.—*J. P. Hylan* (Stoneham, Mass.).

2294. **Clark, E. T.** *The psychology of religious awakening.* New York: Macmillan, 1929. Pp. 170.—The "religious consciousness" is a major factor in mental life. Religion is "the individual's conscious attitude toward and relationship with whatever that individual conceives to be the divine forces or influences having ultimate control over his destiny." Data of the study, the individual's conception of his own religious attitudes. Methods, questionnaire and interview. Groups studied, American college students. Of the 2,174 cases 754 were males, 985 were Methodists, and 1,125 belonged to the Southern evangelical group. There seem to be three types of religious awakening: (1) definite crisis, (2) emotional stimulus, and (3) gradual. Frequency: (1) 6.7%, (2) 27.2%, and (3) 66.1%. In the younger generation the definite crisis experience is rare. The age of religious awakening is moving forward and now takes place at 12 years instead of at 15, as thirty years ago. Older theology with its doctrine of natural depravity caused more definite crisis experiences. Poor home training and failure to attend Sunday school both tend to increase the definite crisis type of religious awakening. Urbanization has reduced the frequency of the definite crisis experience in conversion. The emotions attending religious awakening are described. The modern tendencies in religious attitudes, religious emotions, and religious education are evaluated.—*W. C. Poole, Jr.* (Worcester, Mass.).

2295. **Cole, F.-C.** *Character education among primitive peoples.* *Relig. Educ.*, 1929, 24, 147-149.—Among primitive peoples the child learns chiefly by participation in the work of his elders. The moral and religious code of his people is so intimately interwoven with custom that he is a part of it from his earliest childhood.—*J. P. Hylan* (Stoneham, Mass.).

2296. **Cole, S. G.** *The changing family pattern in America.* *Relig. Educ.*, 1929, 24, 63-70.—The well ordered family presents a variety of delicately balanced relationships between husband and wife, and parent and child. Our changing beliefs and conditions of life make especially difficult the preservation of this balance.—*J. P. Hylan* (Stoneham, Mass.).

2297. **Federn, K.** *Das Aesthetische Problem.* (The problem of esthetics.) Hannover: A. Sponholtz, 1928. Pp. 142. Lw. M. 5.50.—Croce defines esthetics as the science of expression. Up to this time it had been defined as a natural attribute. Now we are referred to the understanding of a human activity. Federn, while developing and limiting Croce's theory, at the same time speaks of the expression as *artistic* and maintains that it is created purely for the sake of its form. Art is not imitation of nature but the shaping of impressions from life to artistic expression, that is in definite quantitative relations which can be felt but whose arithmetic is too complicated to be calculated by the human mind. Federn mentions and explains a series of errors concerning artistic experience and creation; the relations between work and personality,

between art and utility, art and morality, and the essentials of illusion, "truth" in art and style. He also points out the error that laws of individual artistic categories are possible, an idea already rejected by Croce, as well as the overestimation of artistic tendencies and schools. He concludes that art is the creation of a complete expression for the sake of form; that artistic enjoyment is the contemplation of this form for its own sake, and that artistic criticism is the cognition of form as complete, or the realization of what it needs in order to complete it.—K. Federn (Berlin).

2298. Fracker, G. C., & Howard, V. M. Correlation between intelligence and musical talent among university students. *Psychol. Monog.*, 1928, 39, 157-161.—Tests of 230 college students show little correlation between intelligence and musical talent as measured by the Seashore tests. The highest correlation obtained, .32, is between pitch discrimination and IQ.—E. R. Hilgard (Yale).

2299. Garrett, H. E. Jews and others. Some group differences in personality, intelligence, and college achievement. *Person. J.*, 1929, 7, 341-348.—Differences between Jewish college students and other racial and religious groups were measured by means of college grades, the Thorndike Intelligence Examination, the George Washington Social Intelligence Test, and the Laird Personal Inventory B2. This report deals with the differences between these groups as so measured, and also with the relationships between the traits measured. The subjects were 296 Columbia College students. When classified as to ancestry, the Jewish students were found to rank higher in college grades than the other groups, i.e., English, Italian, etc. They were ahead also in general intelligence, although the difference here was not so great as in college achievement. It seems probable that selection plays a not unimportant rôle in these results. There were no reliable differences as regards Social Intelligence or Laird Personal Inventory. Classified as to religion, the Jewish students are again considerably ahead of both the Catholic and Protestant groups in general intelligence as well as in college achievement. They are slightly superior in social intelligence, and somewhat less stable emotionally as measured by the Personal Inventory. These last differences, however, are not reliable. The correlation of the intelligence examination and college grades was .63; the correlation of the Social Intelligence Test and college grades .38; and the correlation of the Personal Inventory and college grades, .11. An intercorrelation of .57 between the Social Intelligence Test and the intelligence examination suggests that these two tests are measuring much in common. Each freshman was asked to write down the name of his "best friend" in the freshman class. 110 "best friends" were found to be members of our group. The correlation between the grades made by these 110 "best friends" is .63, the correlation of intelligence scores .21, and the correlation of social intelligence scores .27. The first of these correlations is probably to be interpreted as due to the fact that best friends presum-

ably work and study together, so that their grades are in part joint products.—(Courtesy *Person. J.*)

2300. Gaw, E. A. Five studies of musical tests. *Psychol. Monog.*, 1928, 39, 145-156.—The five studies consist of (1) the Gaw Singing Test I for elementary ability to sing at sight, used chiefly for sectioning classes in sight singing, (2) and (3) short forms of the time discrimination and tonal memory tests, (4) norms and intercorrelations of the Seashore tests for fifth grade children in Des Moines, (5) results of pitch discrimination tests on new and old type reproducing machines. Evidence points to a higher norm for the new type phonograph (Panatrophe).—E. R. Hilgard (Yale).

2301. Goblot, E. Expérience et intuition. (Experience and intuition.) *J. de psychol.*, 1928, 25, 721-734.—The author believes that the word *intuition*, while frequently used in psychological literature, has not been well enough defined. He distinguishes it from *experience* on the basis of its mediacy. "Intuition will be . . . for us a pseudo-experience, that which seems to be an experience and is not and cannot be one." Intuition is not the result of immediate experience, which may be looked upon as natural perception, but the result of acquired perception, or mediate experience. He relates his definition of the word *intuition* to various fields of philosophy. "Conscience is not a moral experience, but a moral intuition. The distinction is important. For if conscience were an experience it would be infallible. . . ." It is wrong, he thinks, to talk of religious experience. Religion can only be a matter of intuition.—N. L. Munn (Clark).

2302. Griffin, H. C. Changes in the religious attitudes of college students. *Relig. Educ.*, 1929, 24, 159-164.—The questionnaire method was used to discover what new religious beliefs were arrived at by the seniors in their course at Reed College. This carefully itemized study shows that positive as well as negative results came from the college course. The effect of certain studies upon religious belief are shown. Changes in the belief about immortality were uniformly felt as a loss, while other changes furnished adequate compensations.—J. P. Hyman (Stoneham, Mass.).

2303. Guernsey, M. The rôle of consonance and dissonance in music. *Amer. J. Psychol.*, 1928, 40, 173-204.—An attempt is made to isolate certain aspects of the single musical factor of consonance and to correlate them, if possible, with the dissonance tendencies in modern musical composition. 106 subjects were used. They possessed varying degrees of musical education from no musical education at all to that of music teachers. Koenig tuning forks were used to provide low and medium intensities of pure tone. Helmholtz resonators were used for high intensities of pure tone. Organ pipes were used to provide overtone-clangs. The results show that consonance, if kept in strict accordance with its literal definition, cannot be defined in terms of either of the two criteria, fusion or smoothness. Tonal fusion, as such, is a purely sensorial phenomenon, perfectly distinct from the esthetic or affective ex-

perience of consonance. Smoothness, minus a special arbitrary interpretation on the part of the instructor, is equally insufficient as a criterion, denoting as it does manifold connotations and depending obviously on the musical experience of the individual. Of the three criteria the affective elements of pleasantness and unpleasantness seem legitimately applied to consonance. Differences in the perception of consonant intervals are dependent more on the mental setting. It appears that consonance and dissonance are not antonyms other than as they apply to musical tones and to noise.—R. Stone (Clark).

2304. Hall-Quest, A. L. *It's not our fault. Why we can't be good.* New York: Liveright, 1929. Pp. xiv + 399. \$2.50.—A brief history of "sinful behavior" from pre-historic times to the present day is followed by an account of the psychological and social mechanisms which make "sin" inevitable. The thesis here presented is that there is no new sin which is characteristic of modern times and that sinful behavior is the resultant of innate and environmental forces. In a final section of the book the author offers his solution to the present social evils: a more thorough knowledge of the mechanisms of human behavior and a widespread application of the Golden Rule. "The psychologist will become . . . a reliable diagnostician and counsellor unto healthful living."—N. L. Munn (Clark).

2305. Hart, J. K. *Principles of character development in the philosophy of John Dewey.* *Relig. Educ.*, 1929, 24, 113-116.—Morality cannot be given to children, but must be developed through experience that is consistent both on week-days and Sunday. The development of spiritual interests must be consistent with the mental integrity needed in the scientific handling of facts and problems.—J. P. Hylan (Stoneham, Mass.).

2306. Hsiao, H. H. *The mentality of the Chinese and Japanese.* *J. Appl. Psychol.*, 1929, 13, 19-31.—A review covering "all the psychological studies that have been made of the Chinese and Japanese." Fourteen investigators (1915-1926) have studied in all about 5,000 Chinese and Japanese between the approximate ages of 3 and 22 years. A comprehensive table catalogs the tests used and the results. The author finds that in the groups compared considerable variation has existed in both social status and age, and that there has been a "failure to adapt material to racial differences in ways of thinking." He, therefore, believes it to be "unsafe to make generalizations about racial differences."—W. L. Valentine (Ohio State).

2307. Jaensch, E. *Psychological and psychophysical investigations of types in their relation to the psychology of religion.* In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 355-371.—The center of discussion in German psychology today is formed around the question whether there exists a unity in psychology or whether the field should be divided into a naturalistic and a humanistic psychology. Jaensch contends that the work of his institute shows the fundamental unity of psychology. As an

example of this he considers the problem of types. He cites the work demonstrating the psychological and psychophysiological basis of the *integrated human type*. He then shows that on this basis one may analyze the very highest spheres of psychic life, viz., religion and values. Cases are described and subvariants of the main type (T) are distinguished. Such studies Jaensch holds are necessary for the demonstration of the place of the social sciences in the scope of philosophy.—C. Landis (Behavior Research Fund).

2308. Jones, V. *Ideas on right and wrong among teachers and children.* *Teach. Coll. Rec.*, 1929, 30, 529-541.—The responses of 171 seventh and eighth grade children and of 159 teachers to an ethical discrimination test are analyzed and discussed. There is notable lack of agreement among adults and between these and children as to the correct solution of many ethical situations.—H. H. Remmers (Purdue).

2309. Karrer, O. *Das Göttliche in der Seele bei Meister Eckhart.* (The divine in the soul in *Meister Eckhart*.) Würzburg: Becker, 1928. Pp. 126. *Abh. z. Phil. u. Psychol. d. Religion.*—W. S. Hunter (Clark).

2310. Kimbell, H. J. *Tremolo and vibrato.* *Mo. Musical Rec.*, 1929, 59, 41-42.—The writings of Seashore, Metfessel and others notwithstanding, the vibrato and tremolo are rated as bad. Advice is offered for the elimination of these "faults."—P. R. Farnsworth (Stanford).

2311. Meier, N. C. *A measure of art talent.* *Psychol. Monog.*, 1928, 39, 184-199.—Success in graphic art is taken as being closely correlated with the degree of esthetic sensitivity, i.e., the recognition of compositional excellence. The test developed consists of choices between two-variation presentations of pictures, the variations being made from works of reputable artists taken as the basis of rightness. Sample pairs of pictures are given, showing types of variation. Scores on the best 125 items as given to 1,081 subjects in schools ranging from the lower grades through college and private art schools, show a successive increase of median scores from 66 in the 8th grade through 76 for the 12th grade, 82 for art students, and 87 for art faculty. The dispersion of the scores and comparability in different situations suggest that the test has a degree of validity. 24 references.—E. R. Hilgard (Yale).

2312. Meier, N. C., & Seashore, C. E. *The Meier-Seashore art judgment test.* Iowa City: Bur. Educ. Res. & Service, Univ. Iowa, 1929. Pp. 125. \$1.00 single copy, \$75.00 per hundred.—"This test is the culmination of six years of careful research directed toward the development of an objective measure of art talent, and designed to aid in the discovery of promising talent and the reduction of misdirected effort. Art talent is here regarded as a general capacity-ability complex comprising about twenty or more traits and factors. Hence, in spite of the extensiveness of the research, it should not be presumed that a test of this kind affords a complete, final, quantitatively exact measure of art talent.

But it does measure the critical factor—esthetic judgment, which is basic and indispensable. With a high degree of it the individual may look forward to an art career with assurance; without it he should reconsider." The test is designed for use in junior and senior high schools. It consists of a test book of 125 pages of pictures (selected from over 600) printed in phototone and resembling etching. A record sheet is also obtainable.—*L. M. Harden* (Clark).

2313. *Metfessel, M.* The vibrato in celebrated voices. *Scient. Mo.*, 1929, 28, 217-219.—*J. F. Dashiell* (North Carolina).

2314. *Metfessel, M.* What is the voice vibrato? *Psychol. Monog.*, 1928, 39, 126-134.—The vibrato ("that agreeable pulsing heard in singing") is studied on the basis of photographic analysis of the voices of 11 artists from basses to soprano, as these voices are reproduced from Red Seal records. The vibrato shows as a cycle of successive frequencies for which tabular analyses of extent, rate, form, and variability for the different artists are given.—*E. R. Hilgard* (Yale).

2315. *Moran, H.* Biblical knowledge and moral judgments. *Relig. Educ.*, 1929, 24, 171-172.—The author finds a low correlation between religious teaching as commonly found in our Sunday schools, and the fundamental aims, judgments, and motives of life.—*J. P. Hylan* (Stoneham, Mass.).

2316. *Peterson, J., & Lanier, L. H.* Studies in the comparative abilities of whites and negroes. *Ment. Meas. Monog.*, 1929, No. 5. Pp. vi + 156.—Part I. Comparative tests of twelve-year-old white and negro children. A battery of tests were used as a basis of comparison, as follows: Binet group test; Myers Mental Measure; International Group Mental Tests; ingenuity tests; and Yerkes Point Scale. White and negro children in Nashville, Chicago and New York were tested. Results: (1) There is a tendency for the negroes of the highest intellectual ability to migrate to the Northern and Eastern states. (2) Whites surpass in the ingenuity tests, although the differences are on the whole statistically unreliable. The average differences of the group tests were 2.82 times greater than those of the ingenuity tests. This is probably a measure of culture. As to speed of reaction the whites, both of Nashville and New York surpass markedly and reliably the negroes. Part II. Comparisons of certain mental abilities in white and negro adults. Psychological tests used were: (1) general ability tests, (2) mechanical ability tests, (3) musical ability tests, and (4) will-temperament tests. White adults are reliably superior over negro adults in all group intelligence tests. No sex differences were established. Whites excel negroes in all the Seashore tests except rhythm. The will-temperament tests are unsuited as race-tests. White women have greater head length and width, on the average, than the negro women. There are 66 references.—*R. C. Travis* (Yale).

2317. *Sanger, M.* Motherhood in bondage. New York: Brentano, 1928. Pp. xix + 446.—Out of 250,000 letters received by the author from persons

seeking information concerning birth control, 470 are presented with the least possible revision. An appendix by Mary S. Boyd gives a semi-statistical analysis of 5,000 typical letters.—*L. W. Gellermann* (Clark).

2318. *Saudek, R.* Experimentelle Graphologie. (Experimental graphology.) Berlin: Panverlag, 1928. Pp. 347. Rm. 20.—The author sums up all the investigations and experiments that have been made in the field of graphology on the basis of exact scientific methods and adds to these the results of his own 26 years of research. He makes a fundamental distinction between the mechanical, physiological and mental causes that influence the individual hand and treats each region separately. Experimentally he isolates 12 of such factors and evolves laws of handwriting movements which up to this time have not been treated in the literature on this subject. He utilizes for the first time the slow motion camera pictures of Freeman (Chicago) and the microscopic analysis of the handwriting for the psychology of writing. Saudek criticizes the methods which have been used to date by legal experts. He indicates the main lines of reform. The book is divided into 7 chapters: The development of the ability to write from early childhood to maturity; the degree of speed in the act of writing; the genuine and spurious in graphological expression; the central nervous system and the act of writing; individual characteristics of handwriting and their symptomatic significance; the characteristics of honesty and dishonesty; method of characterological analysis of a handwriting. The book offers an extensive bibliography of the international literature on graphology and a glossary of graphological terms.—*R. Saudek* (London).

2319. *Schoen, M.* The aesthetic attitude in music. *Psychol. Monog.*, 1928, 39, 162-183.—A survey of the literature leads to the division of listeners into two general types: (1) the intrinsic, or those who are engrossed in "the thing itself," and (2) the extrinsic, or those to whom music is a means toward an end. The beautiful in music lies in the experiencing of "the thing itself," not in the associations, reflections, emotions which the music may arouse.—*E. R. Hilgard* (Yale).

2320. *Seashore, C. E.* Meier-Seashore art judgment test. *Science*, 1929, 69, 380.—The test consists of pairs of pictures which differ in only one feature, and this feature is indicated in the instructions. By this type of procedure any of the principles of art may be presented in endless variety for objective study.—*G. J. Rich* (Bellevue Hospital).

2321. *Seashore, C. E.* The present status of research in the psychology of music at the University of Iowa. *Univ. Iowa Stud.: Series on Aims and Progress of Research*, 1928, 2, No. 157. Pp. 29.—An inventory of the results achieved and an indication of the future program of research in the psychology of music at Iowa. The following topics are treated: (1) measurement of musical talent; (2) development of educational guidance, both vocational and avocational; (3) laying of scientific

foundations for the esthetics of music; (4) collecting and interpreting of primitive music; (5) setting and analyzing of norms for artistic singing and playing; (6) application of psychology to the improvement of teaching of music; and (7) organization of material for a psychology of music, pure and applied. A selected bibliography of more than 100 titles of publications on the psychology of music from the Iowa laboratory and the Eastman School of Music is included.—*B. Wellman* (Iowa).

2322. **Stanton, H. M.** *Measuring musical talent.* *Person. J.*, 1928, 7, 286-292.—Various uses of the Seashore Measure of Musical Talent in the Eastman School of Music are described, together with the results which are developing from this procedure. The Seashore tests are an integral part of the administrative functions of the School in that they are factors in determining admissions, eliminations, and relative permanence of students; in conferring with students, teachers, and parents; in sectioning freshmen for the course in theory; in awarding scholarships; and in modifying the range of talent estimates made by teachers.—(Courtesy *Person. J.*)

2323. **Stanton, H. M.** *Seashore measures of musical talent.* *Psychol. Monog.*, 1928, 39, 135-144.—The Seashore measures of musical talent in the Eastman School of Music have shown consistency with teachers' estimates of talent, and have shown permanent prognostic value with regard to the successful pursuit of musical study. 6 talent profiles compared with ratings, and 7 tables.—*E. R. Hilgard* (Yale).

2324. **Stevens, F. A., & Miles, W. R.** *The first vocal vibrations in the attack in singing.* *Psychol. Monog.*, 1928, 39, 200-220.—Singing records were made by the aid of the Dodge microscope recorder and photographic registration. Vibrations were counted for five consecutive tenth-second intervals, showing the initial rise in pitch during the first 1/5 sec. as the voice attacks a tone, and tracing the subsequent course of the vibrations. Results are given for accuracy of the attack in humming as compared with open singing; for the "fifth" as compared with the "third" major interval, for the effect of having just listened to a tuning fork; and for the effect of breathing.—*E. R. Hilgard* (Yale).

2325. **Talmey, M.** *Notes on a model language.* *Scient. Mo.*, 1929, 28, 330-335.—Suggestions as to vocabulary for a model (as distinct from an international) language.—*J. F. Dashiell* (North Carolina).

2326. **Terry, R. J.** *The American negro.* *Science*, 1929, 69, 337-441.—The factor of race composition has not received sufficient recognition in the study of the problems of the American negro. The colored hybrids and the pure-blood negroes have generally been dealt with as a biological unit, when in fact the negroid population of the United States is composed of many different types. The hybrid is distinguished biologically from the negro, but society tries to make him a negro. In studies of the intellectual ability of the colored man, both the racial composition and the

cultural advantages of the several groups must be taken into consideration.—*G. J. Rich* (Bellevue Hospital).

2327. **Toops, L. C.** *The measurement of success in marriage and parenthood.* *Teach. Coll. Rec.*, 1929, 30, 579-588.—A detailed outline of research required to build valid tests for the purpose indicated in the title.—*H. H. Remmers* (Purdue).

2328. **Villavicencio, V.** *Otros aspectos de la prostitucion Peruana.* (Other aspects of Peruvian prostitution.) *Bol. de Crimin.*, 1928, 7, 565-578.—The author continues with his study of Peruvian prostitution. The Peruvian prostitute who does not believe in the existence of a divine being is a rare exception to the general rule. Practically all have altars erected to their patron saints. These latter are often invoked when business is dull. Some houses also are placed under the protection of a favorite saint by placing his statue over the doorway. The religious fervor reaches its climax during Holy Week and on certain feast days. The author maintains, however, that the harlot is more superstitious than religious, as can be seen from her many means and methods of predicting her luck in business for the day. The author explains some of the ruses used by the prostitute and her panderer in attempts to blackmail and rob rich merchants. He also discusses some of the means of securing recruits for the white slave traffic. These range from abduction to legitimate marriage.—*J. W. Nagge* (Clark).

2329. **Viteles, M. S.** *The mental status of the negro.* *Ann. Amer. Acad. Pol. & Soc. Sci.*, 1928, 140, 166-177.—Discussion and review of various investigations of the mental status of the negro, with the conclusion that no hard and fast decision can be made as yet because "the customary proofs of racial inequality are scientifically worthless." Bibliography.—*J. C. Spence* (Clark).

2330. **Young, E. H.** *Overcoming cleft palate speech: help for parents and trainers.* Minneapolis: Hill-Young School, 1928. Pp. 61. \$2.00.—The book is intended as a guide in helping mothers to train children with cleft palates to gain correct speech habits. The speech mechanism, the principles of which are explained briefly and simply in Part I, is a matter of inheritance. When this is imperfect, as in the case of a cleft palate, the correct speech habits cannot be formed as usual by mere imitation of the muscular movements. In Part II, the muscular habits necessary for the perfect uttering of the various sounds are given in some detail. If the child is allowed to form incorrect habits before the palate is closed by means of a surgical operation, a deliberate training will be necessary to break up the old habits and form the correct ones. In Part III, the author advocates careful guidance in the formation of these habits even before the palate is closed and the correct sounds are possible. He suggests that for a child between three and six years of age, from 4 to 6 five-minute periods of practice per day are most effective.—*M. B. Mitchell* (Radcliffe).

2331. Young, E. H. **Speech training.** Rep. from *Journal-Lancet*, 1928. Pp. 3-10.—The physical conditions and emotional background must be in good condition when speech training is begun. Defective speech is the result of incorrect habits in the use of the muscles controlling the speech mechanisms. To correct the defects, the muscles should be put through the correct movements and these movements fixated through the daily practice periods extending over months or years as the case demands. Trainers must be able to correct the position of the muscles immediately whenever they are incorrectly placed. Stuttering may be due to a conflict between the use of the tip of the tongue as in "baby talk" and the back of the tongue as in correct speech.—M. B. Mitchell (Radcliffe).

[See also abstracts 2173, 2176, 2206, 2233, 2234, 2251, 2255, 2260, 2261, 2265, 2267, 2269, 2284, 2288, 2289, 2357, 2358, 2373, 2375, 2376, 2378, 2379, 2394, 2395, 2401, 2420, 2425, 2438.]

INDUSTRIAL AND PERSONNEL PROBLEMS

2332. Anderson, V. V. **The problem employee: his study and treatment.** *Person. J.*, 1928, 7, 203-225.—The mental hygiene point of view in dealing with problem employees is contrasted with the usual commercial attitude. The "job misfit"—the problem worker—has been considered a waste product in business and industry. Wherever modern management through improved personnel methods has given much consideration to him it has been in the direction of preventing his employment, or eliminating him when discovered. The tremendous social implications involved in this neglect on the part of the business world to deal in a constructive way with individual cases of work and personality maladjustments are emphasized. The methods of making a psychiatric study are outlined, including the social history, the job behavior study, the physical examination, and the mental examination. Several problem cases are then described in detail, and analyzed. Some employees were found whose difficulties of personality could be satisfactorily treated without transfer to a new job. Others required occupational readjustment. A few were diagnosed as hopeless at the start; and some were abandoned after a tentative period. From a sample of 1,200 employees, about one-fifth were judged by their supervisors to be problem employees. Roughly half of those referred to the psychiatrist have been satisfactorily adjusted and are now assets instead of liabilities to the store and to society.—(Courtesy *Person. J.*)

2333. Bathurst, J. E. **Another basis for vocational guidance.** *Voc. Guid. Mag.*, 1929, 7, 273-275.—Vocational guidance consists first and most importantly "in determining the emotional and temperamental tendencies of the individual which will show what general type of vocation he is best adapted for." To this end a test of 100 traits was constructed which would indicate a social or non-social temperament, and it was given to 100 per-

sons occupying various positions. The temperaments of those tested were determined by the kind of position occupied, their own testimony and that of friends and, in some cases, of employers.—E. B. Heim (Price, Utah).

2334. Becknell, H. E. **Predicting success of Y. M. C. A. secretaries. Diagnostic value of the personal history record.** *Person. J.*, 1928, 7, 172-175.—This article summarizes the methods and results of a study of the personal history data of 172 general secretaries of the Young Men's Christian Association who had been previously ranked for success in the general secretaryship. The object of the study was to devise a scoring system which could be used in connection with the personal history record. The various items of data were studied in relation to the ranking for success. By statistical treatment the significant items were segregated and a scoring system devised. When this scoring system was applied to the personal history records of eighteen general secretaries who had left Y. M. C. A. work it was found that it could have been predicted that fifteen of these, or 83.3%, would be failures.—(Courtesy *Person. J.*)

2335. Brakeman, E. E., & Slocombe, C. S. **A review of recent experimental results relevant to the study of individual accident susceptibility.** *Psychol. Bull.*, 1929, 26, 15-38.—91 titles are reviewed under the heads: vision, reaction times, fatigue, attention, and kinesthetics.—J. F. Dashiell (North Carolina).

2336. Briggs, H. L. **What attainable standards are needed to measure results in vocational education and allied training?** *Voc. Guid. Mag.*, 1929, 7, 254-257.—The author discusses the most important guidance factors in a trade training program, namely, (1) the market, or the number of apprentices required, (2) the selection of the boys for trade training through interviews, physical examination and tests, and (3) the training program.—E. B. Heim (Price, Utah).

2337. Cunliffe, R. B. **Why this career? Significance of vocational information in decisions of college students.** *Person. J.*, 1929, 7, 376-384.—Factors influencing vocational choices of 533 students were studied by the questionnaire method in an effort to answer the following questions: to what extent is vocational information a factor in the vocational choices of college students, and what kinds or types of information influence them most? The most common factors were "interest," "conditions of work," "income," "school subjects," "advice of parents or family," and "demand for workers." The least influential factors were "independence," "social position," "study of occupations," "school activities," and "desire for a professional career." Less than 2% mentioned any deliberate study of occupations. The best informed were influenced by "work experience," "study of occupations," and "immediate opportunity"; the poorest, by "advice of parents or family," "desire for professional

career," "social position," and "ambition."—(Courtesy *Person. J.*)

2338. Freyd, M. Selection of typists and stenographers: information on available tests. *Person. J.*, 1927, 5, 490-510.—The writer presents a summary of essential information on every proposed test for typists and stenographers which has been published. Test researches are reported in three sections: tests for typists, tests for typists and stenographers, and tests for stenographers. Included among these are proficiency, aptitude, and educational tests. Information on each test includes references, evaluations, and the name and address of the publisher of each.—G. L. Barclay (Illinois).

2339. Hanna, J. V. Standards needed in the testing of aptitudes. *Voc. Guid. Mag.*, 1929, 7, 258-263; 282.—The four aspects of the problem developed were (1) the accurate analysis of the working situation, which is always changing, (2) the translation of the work functions into human abilities, including attitudes and driving power, (3) the making of the technique for the discovery and measurement of these abilities reliable and inclusive (considering the individual as a working unit), and (4) careful attention to standards for the administration of test technique and for the interpretation of test results.—E. B. Heim (Price, Utah).

2340. Hartson, L. D. Vocational stability of Oberlin alumni. *Person. J.*, 1928, 7, 176-185.—The length of time the college man requires to become vocationally stable is determined from representative data concerning the graduates of one liberal arts college. The first and the final choices of vocation, the proportions who have remained in the occupation originally chosen, the amount of occupational experimentation, and the relative holding power of the different vocations are determined. The average time required to find the occupation of final choice is less than a year and a half. The choice of a specific field for a career in business, however, has often been made only after many preliminary experiments. There has been little transfer from one type of activity to a quite different type. In the case of the women, the length of time before marriage and the proportion of each occupational group who have married are reported. In a subsequent article are reported the results of a study "Intelligence and scholarship of occupational groups."—(Courtesy *Person. J.*)

2341. Ho, C. J. Which workers have good attendance? *Person. J.*, 1929, 7, 385-389.—The object of this study was to find the extent to which sex, age, marital status, personality difficulties, and home problems were causes of lateness and absenteeism in a department store. The results show that the average number of lates per month for the youngest is 0.89, and for the oldest 0.23; that the average number of absences per month for the youngest is 0.55, and the oldest is 0.18; that the average number of sick benefits per month for the youngest is 0.08, and for the oldest is 0.19. The average number of lates per month for married people is 0.24; for single 0.65; for widowed 1.15.

The average number of absences per month for married people is 0.32; for single, 0.47; for widowed, 0.94. Those who have no personality difficulties show an average number of 0.46 lates per month; those with difficulties of one form or another show 0.63. The average number of absences per month for those with no difficulties is 0.45; for those with some difficulty it is 0.51. Those with no home problems average 0.46 lates per month; those with some problems 0.69. The average number of sick benefits per month is 0.14 for those with no home problems; and 0.31 for those with some. When sex differences are taken into consideration, the results show that women who have home problems have more lates, absences, and sick benefits than those who are without them. But with them, home problems seem to have a tendency to make them more careful about attendance. In general women are more frequently late or absent, but have fewer sick absences of long duration, than men.—(Courtesy *Person. J.*)

2342. Klemm, O. Erfahrungen bei einer Eigenschaftsprüfung an Kriminalbeamten. (Experiences in testing the ability of prison officials.) *Neue psychol. Stud.*, 1929, 5, 3-22.—The author describes a series of 7 tests for determining the ability of prison officials. The 7 tests used were completion, disordered sentences, immediate recall, evaluation of circumstances under which a criminal act might have been performed, comparison of handwriting, comparison of photographs, continued reaction, and observation of sleight-of-hand performances. It was found that the coefficient of correlation between all 7 sub-tests and the officers' judgments was .75. Theoretical considerations regarding the practicability of using such tests in selecting officials and the reliability of the tests are considered; the average coefficient of reliability is reported as .70.—D. E. Johannsen (Clark).

2343. Lane, M. R. Occupational studies of 1927 and 1928. *Voc. Guid. Mag.*, 1929, 7, 312-313; 314-316.—Since 1920, 350 pamphlet studies of occupations have been published. During 1927-1928 the number of these studies has nearly doubled over that of the previous six years and comprises 51 bulletins and 92 short studies. The number of sources of these studies has increased from 17 to 21 during the same two years. 22 short studies have been published in book form. A dozen short studies which have appeared in magazines have been reprinted to meet the demand. The result of a canvass among leaders in the field indicates that occupational studies are of value. Every attempt is being made by the members of the committee of the occupational research section of the National Vocational Guidance Association to improve the quality of future studies. The research of the last two years reveals that many leaders in the field prefer the shorter monographs, while an equally large number prefer the longer bulletins. In general it was found that "longer studies in a wide variety of situations and for more intensive uses" were desired. There is a bibliography of studies made during 1927-1928.

It is classified according to the sources of these studies. The bibliography supplements the one in *Occupational Studies*, Part III, pp. 32-44. International Textbook Co., Scranton, Pa.—*H. S. Clapp* (Valhalla, N. Y.).

2344. Newhall, S. M., & Heim, M. H. Memory value of absolute size in magazine advertising. *J. Appl. Psychol.*, 1929, 13, 62-75.—Absolute size means the area as measured in some standard unit, and is to be distinguished from relative size, which refers to the fraction of a page given to advertising. Absolute size has not been previously investigated as regards memory value and attention. The method of aided recall (Poffenberger) was used to test the memory value of 27 different ads of 3 absolute sizes each. The ads were selected from the Saturday Evening Post with a view to photostatic reproduction in sizes of 50, 100, and 150 sq. in. (the extremes being approximately the range of 100 unselected measured ads). Three dummies were presented, each to one of 3 groups of subjects (45 each). Three times of exposure, 2, 5, and 15 seconds, were used. The subjects were scored on memory of trade names and pictures. The results would indicate that in full-page advertising, the absolute size of the page is unimportant as regards memory value for trade names, regardless of familiarity.—*W. L. Valentine* (Ohio State).

2345. Pear, T. H. Skill. *Person. J.*, 1927, 5, 478-489.—The writer brings together various theories of the nature of skill and presents a classification of the kinds of skill wanted by industry. Skill must be differentiated from capacity and ability. A highly skilled action is distinguished by the integration of the part-actions. "Knack" is the ability to impose a special type of pattern upon one's behavior. Two types of high-grade skill are: (1) unoriginal, which may reach a very high level of complexity and excellence, and (2) skill in which there is something personal, new, creative, unique, and difficult or impossible to copy. *Intensive* skill is the mastery of one movement-pattern perfectly; *extensive* skill is the mastery of several. Some features of skill in both work and play are only accidental, while others are essential. Two requisites in learning a difficult set of actions are (1) the ability to perform a temporal series of connected movements, when at any moment attention is concentrated upon the performance of one movement only, and (2) the ability to perform several actions simultaneously. Industrial skills are classified in five groups, from the lowest, consisting of responses imperfectly adapted to the situation which evokes them, to the highest type, creative skill.—*G. L. Barclay* (Illinois).

2346. Rodgers, R. H. Guidance values of vocational information and exploratory activities. *Voc. Guid. Mag.*, 1929, 7, 266-269.—A review of the attempt to aid individuals to ascertain their vocational interests, aptitudes and personal and physical fitness for various occupations through descriptive ma-

terial pertaining to different occupations and through vocational instruction.—*E. B. Heim* (Price, Utah).

2347. Shepard, G. H. Effect of rest periods on production. *Person. J.*, 1928, 7, 186-202.—The effect of rest periods on fatigue in light-heavy muscular work was tested in the laboratory by having students work at a gymnasium chest-weight machine under controlled conditions. The results indicate that a worker on light-heavy muscular work, and on an 8-hour day, cannot give his maximum output unless he rests at least 16.11% of the time during working hours. There were some indications that it is best to increase the proportionate sizes of rest periods as the day advances and fatigue accumulates. The subjects of this study, who were students and of superior intelligence, were able, after a little instruction and experience, to select work and rest periods for themselves almost as well as anyone who made tests on them.—(Courtesy *Person. J.*)

2348. Thomas, H. P. The employment history of auxiliary pupils. *Voc. Guid. Mag.*, 1929, 7, 245-250.—This is a study of 142 boys and girls, ages 16 to 21, the majority of whom have been out of school more than a year. The total number of jobs was 389 (212 being factory jobs), most of them being held for a short time with long periods of idleness between. The greatest idle period occurred between leaving school and first job. The author concludes that there is unusual restlessness among these pupils and indicates that the schools might help in further curricular adjustments and in placement.—*E. B. Heim* (Price, Utah).

2349. Viteles, M. S., & Gardner, H. M. Women taxicab drivers. Sex differences in proneness to motor vehicle accidents. *Person. J.*, 1929, 7, 349-355.—Preliminary to the main portion of this study of sex differences in accident rate of taxicab drivers, a survey was made of operators of non-commercial vehicles. Comparisons made in the District of Columbia during 1927, in San Francisco, in Massachusetts, and in Connecticut, all favor the women drivers. But variables other than sex differences may tend to give this result. To avoid these variables, a study of taxicab drivers in a large Eastern city was made in which (1) type of vehicle operated, (2) mechanical condition of vehicle, (3) weather conditions, and (4) traffic conditions were constants. Only one variable—that of training—is noted, in which the men excelled. The women taxicab drivers were responsible for 0.767 accidents per thousand miles, as compared to 0.257 accidents per thousand miles for men; and the women were responsible for 5.063 accidents per \$1,000 revenue as compared to 1.449 accidents per \$1,000 revenue for men. But the survey suggests that the accidents in which women are involved are less serious.—(Courtesy *Person. J.*)

[See also abstracts 2203, 2209, 2378, 2397, 2410, 2422, 2441, 2449, 2452.]

CHILDHOOD AND ADOLESCENCE

2350. Anderson, J. E., & Goodenough, F. *The modern baby book and child development record*. New York: Norton, 1929. \$5.00.—W. S. Hunter (Clark).

2351. Blatz, W. E., & Bott, H. *Parents and the pre-school child*. New York: Morrow, 1929. Pp. 352. \$3.00.—W. S. Hunter (Clark).

2352. Bowers, W. C. *A guide for the cooperative study of the experiences of growing persons. (II) Additional instruments for collecting data concerning the experiences of growing persons. Rel. Educ.*, 1929, 24, 155-158.—J. P. Hylan (Stoneham, Mass.).

2353. Dayton, N. A. *Height, weight and intelligence relationships in 3,553 retarded school children. New England J. Med.*, 1928, 199, 934-938.—The Fernald ten point scale was used by the traveling clinics of the Fernald and Wrentham State Schools in examining 3,553 retarded public school children of Massachusetts. Of this number 72% were diagnosed as feeble-minded. These retarded children are slightly under average in weight as compared with the child population in general. The difference is less marked in height. The curves for weight and height for this group show a greater deviation from the mean than do the normal curves for weight and height. That a relationship between height and intelligence and weight and intelligence exists is seen from the following results: The mean IQ for the three height groups are: over average, $68.5 \pm .34$ (S.D.); average, $66.3 \pm .34$ (S.D.); under average $61.5 \pm .34$ (S.D.). The mean IQ for the three weight groups are as follows: over average, $68.4 \pm .37$ (S.D.); average, $67.1 \pm .41$ (S.D.); under average, $62.8 \pm .33$ (S.D.). Children who are under average in height tend to be under average in weight. Over 67% of children over average in height were also over average in weight. 65% under average in height were under average in weight. These combinations present children lower in intelligence than those having a single height or weight deficiency. The mean IQ of the over average height group is above the mean of the under average height group. The difference is $7.0 \pm .48$ (S.D.). In the over average weight group the mean IQ is above that of the under average weight group. The difference is $5.6 \pm .48$ (S.D.). This study makes no attempt to determine the significance of variations in height and weight in relation to mental defect, but it does show that physical deficiency is closely related to mental deficiency.—H. S. Clapp (New Canaan, Conn.).

2354. Fenton, N. *The only child. J. Genet. Psychol.*, 1928, 35, 546-556.—Teachers' ratings of 12 personality traits on a revised form of Blanton's rating scale, made upon 197 children distributed in school grades from kindergarten to sixth, including 34 only children, showed overlappings of the "only" and the "not-only" groups by from 73.1% to

91.9%. In observed symptoms checked from a printed list, there were fewer only children noted as nervous, those so noted seeming to have more symptoms than other cases. The Woodworth questionnaire, returned from 512 college students, including 73 only children, gave only scant evidence of greater incidence among the latter of neurotic symptoms.—J. F. Dashiell (North Carolina).

2355. Fischer, E. *Der Religiöse Komplex im Kindertraum. (The religious complex in children's dreams.)* Stuttgart: J. Püttmann, 1929. Pp. 73. Rm. 2.50.—This investigation of about 3,000 Protestant and Catholic children between the ages of 6-15 years starts with a questionnaire on dream experiences whose content is not confined to religion. It first justifies the possibility and necessity of such an investigation on the basis of child-religion- and dream-psychology. The aim of the first (casuistic-descriptive) part is to ascertain the quality and quantity in children's dreams of religio-ceremonial ideas, feelings and volitions. The second (differentio-psychological) part investigates the dependence of religious dream contents on the child's sex, age and creed. The obvious and important qualitative and especially quantitative differences prompted us to investigate still further to what extent religious disposition or training are decisive in the child's religious development. We concluded that the latter factor is the more important in the process of a child's religious education. The fourth part deals with the development of a child's religion, especially of the uniqueness of juvenile religious conceptions. The results of our investigation point to a far-reaching similarity between juvenile and primitive religiosity. The last chapter contains several pedagogical conclusions. In consideration of the pros and cons of the necessity, possibility and fruitfulness of religious education in school we set up several principles.—E. Fischer (Mossdorf bei Burgstaedt in Sachsen).

2356. Fuchs, H. *Psychologie der Jugendlichen des Landes. (The psychology of rural youth.)* Wittenberg: K. Herroses Verlag, 1928. Pp. 240. M. (Hlw.) 6.80.—The author describes the psychic uniqueness of rural juveniles on the basis of life histories, records of many kinds and observations that he was able to make during his work in a rural *Heimvolkshochschule*. Another basis of the work is the answers of about 2,000 juveniles to a questionnaire. He took into account the effects of rural environmental influences. Social psychology forms the starting point, but is always supplemented by other psychological viewpoints. The author consciously repudiates the romantic conception of country people and tries to see the young people of the country as they really are and as their psychic individuality reveals itself in comparison with young people of a different environment, and especially in comparison with high school children. The book falls under the following headings: the essence and meaning of youth; the development of individual

psychic functions in rural youth; the experience of nature; the social ideal; the experience of friendship; the erotic and sexual attitude; rural youth and vocation; rural youth in relation to culture; religious experience; total character (type).—*H. Fuchs* (Tablonken).

2357. *Furfey, P. H.* Social problems of childhood. New York: Macmillan, 1929. Pp. 288. \$2.25.—A résumé of the activities throughout the United States in dealing with child health, delinquency, recreation, labor, etc. Bibliography.—*E. B. Heim* (Price, Utah).

2358. *Katz, D.* The development of conscience in the child as revealed by his talks with adults. In *Feelings and Emotions: The Wittenberg Symposium*. Worcester, Mass.: Clark Univ. Press, 1928. Pp. 332-343.—Katz has recorded verbatim over 300 chats or dialogues between his wife or himself and his two children. An analysis of these chats shows that these children regard the following as violations of the social order: (1) anti-social acts, which manifest themselves in conduct involving attempted or accomplished bodily injury; (2) injury to things; (3) harm to one's own person.—*C. Landis* (Behavior Research Fund).

2359. *Linfert, H. E., & Hierholzer, H. M.* A scale for measuring the mental development of infants during the first year of life. *Cath. Univ. Amer.: Stud. Psychol. & Psychiat.*, 1928, 1, No. 4. Pp. 33.—The Linfert-Hierholzer scale is described in detail, with standardized scores based upon the testing of 300 infants, 50 at each of the following ages: one, two, four, six, nine, and twelve months. There are two series, for months one to five, and for months six to twelve, respectively.—*E. R. Hilgard* (Yale).

2360. *Lowrey, L. G.* Report for the year ending June 30, 1928. New York: Institute for Child Guidance, 1928. Pp. 66.—In opening his report of the first year's work of the Institute the author shows how the Institute for Child Guidance evolved as a direct result of the needs discovered by the Bureau of Children's Guidance of the New York School of Social Work and the demonstration child guidance clinics operated by the National Committee for Mental Hygiene. The Institute is a "center for field or clinical training" in the study and treatment of maladjusted children. During the first year the total number of individuals in training was 63. Of this number five were fellows in psychiatry, three were fellows in psychology and the remaining group was comprised of students from the New York and Smith College schools for social work, which are affiliated with the Institute. 148 cases were received by transfer from the Bureau of Child Guidance. 651 cases were referred from the community through the usual sources. Of these 651 cases only 479 were accepted. 42 cases were pending at the close of the year. The greater part of the report is given over to a detailed account of the organization and tech-

nique of the clinical and administrative divisions. This work has been critically evaluated and a description is given of the methods and plans by means of which the efficiency of the organization may be increased. Inasmuch as the task of organization consumed so much time the Institute did little research. The papers published by the staff are listed in the appendix. It is the aim of the Institute to undertake the publication of "The Institute for Child Guidance Studies." These will consist largely of reprints of articles published in standard journals, together with occasional monographs appearing for the first time. These studies are to be made on Institute material and will be issued by the Division of Publications of the Commonwealth Fund.—*H. S. Clapp* (New Canaan, Conn.).

2361. *Luria, A. R.* The problem of the cultural behavior of the child. *J. Genet. Psychol.*, 1928, 35, 493-506.—To study the genesis of cultural, i.e., tool-using, behavior in the child a method using "double-stimulation" is adopted: along with the original stimulus (or situation) is presented a second stimulus that is to play a distinct rôle, that of an instrument. Two procedures have been employed: (1) setting the problem and noting what means (instruments, technique) the child invents for its solution, and (2) providing complete means ready to hand, and noting how the child adopts them. Experimentation has brought to light stages in cultural behavior: (1) the "pre-instrumental" stage, in which the child adopts no auxiliary means, (2) the "magical," in which he uses such means but without grasp of the rational connections involved, and (3) the "true instrumental," in which he shows ability to adopt the means judiciously.—*J. F. Dashiell* (North Carolina).

2362. *Oschatz, H.* Die Theorien der psychischen Entwicklungsstufen und ihre Beziehung zur Elementarpraxis. (The theories of the psychical developmental levels and their relation to elementary practice.) *Neue Bahnen*, 1929, 40, 2-10.—The article contains a comparative table of the most well-known systems on the process of psychic development from the age of 5-9, according to Meumann, Stern, Spranger, Tumlirz, Henning, the Teachers' Association of Dresden, Kroh and Ch. Buehler.—*A. Römer* (Leipzig).

2363. *Piaget, J.* La première année de l'enfant. (The child's first year.) *Brit. J. Psychol.*, 1927, 18, 97-120.—One may study the child's thought by interpreting its overt behavior in terms of the thought processes which accompany such behavior in oneself. This may be further checked by reference to the intermediate stages of childhood, adolescence, etc. Using such a method, the author discovers that the child's thought in the first year represents a solipsism, an "absolute egocentricity." "The thought of the baby consists of an ensemble of accommodatory movements adapted to the outside world. Nevertheless this thought recalls in other ways a continuous

lively dream with all the characteristics of integral autism." The solipsism of the baby is followed in later stages by the egocentricity of the child.—N. L. Munn (Clark).

2364. Piaget, J. The child's conception of the world. New York: Harcourt, Brace, 1929. Pp. ix + 397. \$4.00.—Translation of *La Representation du Monde chez les Enfants*, abstracted in I: 1173.—R. R. Willoughby (Clark).

[See also abstracts 2146, 2147, 2235, 2237, 2270, 2274, 2293, 2308, 2384, 2419, 2440, 2442.]

EDUCATIONAL PSYCHOLOGY

2365. Arnold, H. J. Seashore's plan of sectioning on the basis of ability as a motivation device. *Psychol. Monog.*, 1928, 39, 102-105.—60% of the enrollment in three "low" sections of an introductory course in psychology responded to motivation produced by sectioning on the basis of ability.—C. W. Bray (Princeton).

2366. Atmanspacher, O. Zahlen- und Rechenpsychologie. (The psychology of numbers and calculation.) Annaberg i. Erzg.: Neupädagogischer Verlag, 1928. Pp. 99. M. 3.—W. S. Hunter (Clark).

2367. Bane, L. Character training in the home. *Rel. Educ.*, 1929, 24, 129-132.—It has been the tendency for the more obvious functions of the home to be taken over by other institutions or industry. But there is no place like home for teaching loyalty, honesty, courtesy, trustworthiness, truthfulness, kindness, sympathy, cooperativeness, tolerance, and the many other traits that make up character. "The souls of little children are marvelously delicate and tender and keep forever the shadow that first falls on them, and that is the mother's."—J. P. Hylan (Stoneham, Mass.).

2368. Basset, S. J. Sex differences in history retention. *School & Soc.*, 1929, 29, 397-398.—95 sixth- and seventh-grade boys were matched with the same number of girls on the basis of performance on certain standardized history tests, as well as on the basis of ratings on interest and effort. At four-month intervals throughout a year or a year and a third, the groups were given a history knowledge retention test. The boys seemed to be slightly superior to the girls in their ability to remember the facts and principles of history. The former excelled especially in retention of information concerning war, fighting, and geographical location. The girls were superior to the boys in their retention of that content which treated of domestic conditions and home life.—H. L. Koch (Texas).

2369. Bathurst, J. E., & Scheidemann, N. V. The college psychology test. *J. Appl. Psychol.*, 1929, 13, 81-85.—A standardized quiz covering the elementary course in psychology. It consists of T-F and multiple choice items (samples given). It was

given to 347 students in different colleges, who made a median score of 67. The highest possible score is 159 and the odd vs. even items correlate 0.67.—W. L. Valentine (Ohio State).

2370. Behler, Ph. Psychologie des Berufsschülern. (The psychology of vocational school children.) Köln: M. Du Mont-Schauberg'sche Buchh., 1928. Pp. 95. M. 3.—W. S. Hunter (Clark).

2371. Boysen, A. An experiment in character training. *Philippine Pub. Schools*, 1929, 2, 62-65.—In an experiment in character training in the Lyndale school each pupil is marked on the following ten character traits: reliability, obedience, industry, self-control, social attitudes, judgment, punctuality, initiative, personal habits, and thrift. The children all keep individual graphs of their work, so that they may see their improvement. The writer feels that the experiment has been very successful and that this system of character training is very important.—Y. Silverman (Clark).

2372. Brewington, A. A plan for a scientific study of the process of reading shorthand. Research Studies in Commercial Education, II, collected by E. G. Blackstone. *Univ. Iowa Monog.: Monog. Educ.*, 1928, First series, No. 8, 112-116.—A proposed plan for the study of the technique of the reading process when the material is in shorthand, including a study of eye movements; the effect of structural features of the various shorthand systems on the reading process; the effect of organization of materials and of different methods of teaching.—B. Wellman (Iowa).

2373. Brumbaugh, A. J. Character education in the minority religious groups. *Rel. Educ.*, 1929, 24, 58-62.—Mennonites, Amish, River Brethren, and Dunkards illustrate the religious groups in mind. Their original tendency to live apart and not mingle with people of other persuasions intensified their type of social life and education. Children naturally absorbed their religion and their common virtues from their parents. Sermons, revivals and church discipline reenforced the home teachings. Summer camps devoted to the religious and intellectual interests of the young are now being used, and the usual methods of the denominational colleges.—J. P. Hylan (Stoneham, Mass.).

2374. Buckingham, B. R. A brief method of evaluating test material. *J. Educ. Res.*, 1929, 19, 159-168.—One of the stumbling blocks of the preparation of standardized tests has been the problem of the evaluation of each of the test items. This is particularly true if one is dealing with pupils of different grades, as a 40% question for the third grade means something quite different from a 40% question for the fourth or fifth grades. The comparison of pupil and question scores is a very long and tedious problem. The author attempts to have a series in which the differences in difficulty of each part are equal to the average increment of training which the pupil should acquire for a year. The re-

sults are of a spelling test given to 4,264 pupils of the 4th, 5th and 6th grades in 11 school systems. Of the 50 words in the test the percentages of correct response for the three grades were relatively 51, 66 and 76. Hence the author considers 25 of these as standardized words and the other 25 as undetermined words. The problem now is to find out to what extent one may utilize the 25 standardized words to determine the difficulty of the 25 undetermined words. A consideration of this problem was made from the records of 202 fourth grade pupils taken from the records of one of the cities reported above. From a consideration of the records for individual words the author believes that the problem is promising.—*S. W. Fernberger* (Pennsylvania).

2375. Calhoun, R. L. Character education in the reformation and after. *Rel. Educ.*, 1929, 24, 34-40.—The easy multiplication of books at the time of the Reformation gave great impetus to humanist grammarians and rhetoricians who believed that by learning to read, write, and speak correctly, one may learn to think and live correctly. There were translations of the Bible by both Protestants and Catholics, and much emphasis was placed on catechisms.—*J. P. Hylan* (Stoneham, Mass.).

2376. Case, S. J. Character education in the early church. *Rel. Educ.*, 1929, 24, 28-33.—From the first, Christian teachers placed special stress upon moral character. Public gatherings where scripture lessons and public exhortations to right living were employed were regarded as effective agents. Repentance and both private and public confessions were required of transgressors.—*J. P. Hylan* (Stoneham, Mass.).

2377. Chamberlin, G. L. Religious education among the ancient Hebrews. *Rel. Educ.*, 1929, 24, 13-21.—This is a condensed account of the way that the struggles and hopes of a nation found expression in religious development. The social organization, closeness of family life, and sense of communal responsibility of the Hebrews was such that the religious education of the youth was part and parcel of daily life.—*J. P. Hylan* (Stoneham, Mass.).

2378. Clark, F. E. The use of occupational studies in the classroom and in the personal interview. *Voc. Guid. Mag.*, 1929, 7, 294-301.—The objectives of the social science course and the vocational guidance movement must necessarily condition the use made of occupational material. The course designed to teach the pupil to acquire a technique is superior to one which aims to impart information concerning occupations. When the objective is informational, the course grows uninteresting and tends to become a "flat plateau of similar units." A wrong attitude on the part of the pupil is fostered by the informational course, since it merely focusses the child's attention on a life career. The vocational civics course uses the occupational material to encourage the social point of view. The author warns against using occupational material exclusively, since there is a danger that the pupil will

not be taught methods of studying occupations. In the personal interview the adviser should lead the pupil through the processes by which she reached her conclusions on a given course to be pursued. The occupational material is useful in teaching pupils to evaluate sources of information. It should be scientific and free from moralizing. The emotional and ethical significance should be brought out by the manner in which the teacher and adviser present it.—*H. S. Clapp* (Valhalla, N. Y.).

2379. Coon, R. H. Character education in Greece and Rome. *Rel. Educ.*, 1929, 24, 22-27.—Sparta imposed a relentless discipline upon the citizens of the state, but they became greedy, cruel and dishonest when removed from its control. In later times the Greeks were more in love with beauty than virtue. In Rome virtue was a more personal matter and was most effectively taught by example.—*J. P. Hylan* (Stoneham, Mass.).

2380. Crews, H. R. An experiment with finger gymnastics in teaching typewriting. *Research Studies in Commercial Education*, III, collected by E. G. Blackstone. *Univ. Iowa Monog.: Monog. Educ.*, 1928, First Series, No. 9, 126-144.—Two sections of typewriting pupils were taught similarly except that one section received instruction in finger gymnastics for about five minutes daily. The sections were divided on the basis of intelligence, training, high school marks and typing scores. Although the number of cases was too small for a definite conclusion, the author believes that a class using gymnastic exercises will write faster and more accurately than a class not using the exercises.—*B. Wellman* (Iowa).

2381. Daringer, H. F. An objective measure of ability to make topical outlines. *J. Educ. Psychol.*, 1929, 20, 112-118.—A multiple choice test has been constructed to measure ability (1) to select the central idea of a paragraph; (2) to determine the number of important supporting details; and (3) their number being known, to select the correct supporting details. The criterion consisted of 120 outlines by 40 Grade IX pupils. The test was constructed after analysis of the outlines made by 110 students for a series of 28 paragraphs. Two forms, with questions on six paragraphs each, correlate 0.867 and 0.743 with the criterion, and 0.900 with each other.—*J. A. McGeoch* (Arkansas).

2382. Day, H. E., Fushfeld, I. S., & Pintner, R. A survey of American schools for the deaf. Washington, D. C.: National Research Council, 1928. Pp. 296.—The purpose of the survey is to suggest standards for the general betterment of educational institutions for the deaf. The investigation was necessarily limited to a number of schools which typified the practices followed. 43 schools (29 residential and 14 day-schools) were invited to participate in the survey. Deaf children numbering 8,300 were included in the schools visited, this being 54% of the total attendance of schools for the deaf at the time of the survey (1924-25). The study covered

practically all aspects of management, instruction, general policy, and pupil age. Degree of residual hearing, results of speech work, intelligence and educational achievement of the deaf children were also investigated. Chapter VII summarizes data on residential schools in the form of a description of a "composite school." Chapter X summarizes the day-school similarly. The median of the degree of hearing in the children tested was found to be 21-25% of normal hearing; only 3% were totally deaf. Tests given to determine the efficiency of speech training point to the possibility of developing a standard method of evaluating the results of this type of work. A comparison of the efficiency of schools is made possible by means of the differences between the mental and the educational medians for each school. Hearing children of 12-15 years are distinctly superior to the deaf in intelligence, and more markedly so in educational attainment. Children in day-schools show greater intelligence and educational achievement and a higher median level of hearing than those in residential schools.—*G. L. Barclay* (Illinois).

2383. Dennis, C. T. A ten-minute observation in the library. *School & Soc.*, 1929, 29, 336-338.—100 college students were observed through the first ten minutes of their so-called study in the library. The amount of time spent in concentrated work was determined, as well as the number and kind of activities which served as distractions. On the average, 40% of the time was given over to distractions, the per cent. being slightly higher for girls than for boys. Conversation tended generally to occur most frequently among the distractions and to be the most time-consuming.—*H. L. Koch* (Texas).

2384. Descoendres, A. The education of mentally defective children. (Tr. by E. F. Row.) Boston: Heath, n. d. Pp. 312. \$2.00.—It is the author's aim to present a practical textbook which will be of use to directors and teachers of special classes as well as to teachers whose classes include some backward children who are unable to grasp the school work through ordinary teaching methods. It is also intended for parents with a defective child at a distance from special schools. The value of these teaching methods to normal children is stressed throughout the book. Chapter I gives a brief history of the subject of mental deficiency as well as several definitions and classifications. The remainder of the chapter is devoted to a discussion of the pedagogical, psychological and medical examinations which should be given every backward child. The organization of special classes is the subject matter of the second chapter. It is the author's opinion that the Mannheim system of *Förderklassen*, or advancement classes, is the best system in use. The residential and day school systems of the present day are described in detail. The following governing principles of special class teaching are laid down: the natural activity of the pupil should be utilized; importance should be attached to perceptual knowledge and sensory training; the different subjects

should be grouped around a single central subject; the needs of each particular type of mentality should be taken into account; and finally, the utilitarian character of teaching must be considered. Since the organization of each school differs, no universal application for programs and schedules can be given. With backward children attention is the most important phenomenon to be studied. The author describes a number of original games and various selected Decroly games for sense training. Rouma's lessons in attention are given in detail. They are suitable as a source of enjoyment for children as well as for their utilitarian character for learning to read and spell. There is a close relationship between motor development and mental development and for this reason as well as for its curative effects physical training should have a place in the program of the special class. The author distinguishes between natural and systematic physical training and favors the Swedish drill as the best system. The handwork classes continue and complete the physical training. In this chapter on handwork the Froebelian exercises and numerous manual occupations suitable for backward children are described in detail. Drawing is the last stage of other forms of handwork. A chapter is given over to this subject from the viewpoint of teaching practice. The teacher should make use of the object lesson in all subjects. Everything that cannot be presented perceptually must be excluded from the program. The chapter concludes with a description of two model object lessons. The part played by perception in guarding against the verbalism of the mental defective is stressed in the chapter on speech and the utilitarian character of speech is noted. Examples of interesting speech phenomena in backward children are given. In summarizing the functions of speech and their corresponding defects the author follows Rouma's work on speech defects. The chapter also contains a description of a number of games useful in speech training. The subject of reading is gone into in some detail and the syncretic and synthetic methods of teaching reading are critically evaluated. The author concludes from her observations that we should employ whatever method is best suited to the needs of the different mental types. As in the case of reading great elasticity is needed to adapt the teaching of spelling to the various types. The progress should be slow and should keep pace with reading. The spelling games given have a twofold purpose. First, those children unable to write can learn to spell; and second, the division of work gives the child an opportunity to devote all of his attention to writing. Two chapters are devoted to arithmetic in the program of special classes. The author's aim as in all methods described is to be practical. Instead of laying stress upon the theory of the subject she gives in detail various methods and processes which are suitable to defective beginners and which may serve as indications of the line to be followed. The author emphasizes the part the teacher's personality

plays in the moral training of backward children. An appendix contains three plates illustrating the types of educational games employed by the author. In addition there are two plates of drawings by backward children and one plate illustrating the part drawing plays as an aid in teaching. Finally, there is an index of the various games named in the book.—*H. S. Clapp* (New Canaan, Conn.).

2385. Entwistle, B. S. An experiment with rhythm in teaching typewriting. *Research Studies in Commercial Education, II*, collected by E. G. Blackstone. *Univ. Iowa Monog.: Monog. Educ.*, 1928, First series, No. 8, 75-83.—Three beginning classes of typing in high school were taught without any mention of rhythm and three others were encouraged to use rhythm all the time. Other factors than rhythm were kept constant. The non-rhythm group wrote faster, with slightly more errors, and the net score was slightly higher. The same results were found when pupils were paired on the basis of mental ability.—*B. Wellman* (Iowa).

2386. Paris, E. The implications of behaviorism for character education. *Rel. Educ.*, 1929, 24, 117-121.—Behaviorism is the attempt to state the essentials of human life in terms of habit and conduct by denying its mental or conscious aspect. But in character education motives and ideals, while not independent of behavior, are essential aspects that have to be studied and without which external movements cannot be understood.—*J. P. Hyland* (Stoneham, Mass.).

2387. Ferrière, A. The activity school. (Tr. by F. D. Moore & F. C. Wooton.) New York: Day, 1928. Pp. xvii + 339. \$4.00.—This translation of the third edition of Ferrière's book is a detailed exposition of the new movement in education in European schools. Chapter I is concerned with the history of the new movement, and the ideas of Rousseau, Pestalozzi and Paul Robin. Chapter II, *The Psychological Foundations of the Activity School*, discusses the theory underlying the methods embodied in the schools. Chapters III, IV, and V describe respectively manual, social and intellectual activity in the activity school in some detail, giving the practical application of the theories discussed elsewhere. Chapter VI, *The Future of the Activity School*, gives the principles adopted by the *Ligue Internationale pour l'Education Nouvelle*, established in 1921, and an outline of the aims which the *Ligue* hopes to accomplish. Index.—*J. C. Spence* (Clark).

2388. Flemming, C. W., & Woodring, M. N. Training high school pupils in study procedures, with emphasis upon reading. *Teach. Coll. Rec.*, 1929, 30, 589-610.—An analysis of nine major types of reading activities which function in high school study, together with references to tests, readers, and other material available relative to this problem.—*H. H. Remmers* (Purdue).

2389. Gray, C. T. A comparison of two types of silent reading as used by children in different school

grades. *J. Educ. Psychol.*, 1929, 20, 169-176.—The problem is to determine the extent to which children in Grades IV, V, and VI are able to use two different silent reading methods: (1) reading to answer questions which have been antecedently given; and (2) reading to answer questions which are to be given after the reading is finished. It is concluded that these grades are unable to differentiate and use the two methods in the most effective way, but the regular school work increases such efficiency yearly. Specific training would apparently aid greatly in the development of the two types of reading.—*J. A. McGeoch* (Arkansas).

2390. Heck, A. O. Administration of pupil personnel; a book on pupil-accounting written from the point of view of the classroom teacher. Boston: Ginn, 1929. Pp. 499. \$2.40.—*W. S. Hunter* (Clark).

2391. Horn, E. The child's early experience with the letter A. *J. Educ. Psychol.*, 1929, 20, 161-168.—Tabular summaries are given of the difficulties confronting children in Grades I to III in an attempt rationally to control the letter a in spelling or in reading. The reading data are from an unpublished doctoral thesis by A. D. Cordt. In first, second, and third readers, for example, 47 different sound-letter associations for a occur. The unphonetic character of the English language must be taken into account in the teaching of phonics.—*J. A. McGeoch* (Arkansas).

2392. Husband, R. W. Psychology in junior colleges. *Psychol. Bull.*, 1929, 26, 39-40.—*J. F. Dashiell* (North Carolina).

2393. Huxtable, Z. L. Criteria for judging thought content in written English. *J. Educ. Res.*, 1929, 19, 188-195.—An effort was made to evaluate statistically the thought content, along with other factors, in a study of the composition abilities of 29,000 children in junior high schools in Los Angeles. Comparisons were made with the IQ's of the pupils. Only 1,200 papers were included in the study. Papers were read both with and without knowledge of the IQ's. A correlation of 0.63 was obtained between IQ and thought content, which latter was judged on the basis of 5 levels of thought complexity.—*S. W. Fernberger* (Pennsylvania).

2394. Jahn, E. Die Bedeutung des Tiefenbewusstseins für die religiös-ethische Erziehung. (The significance of the unconscious for religious-ethical education.) *Päd. Werte*, 1929, 36, 129-135.—Jahn emphasizes the absorbing power, the hunger for stimuli and the storing power of the young soul. He advocates therefore the early instillation into the child's soul of the religious and ethical motives, that is, "unconscious stratification."—*A. Römer* (Leipzig).

2395. Johnson, G. Character education in the Catholic Church. *Rel. Educ.*, 1929, 24, 54-57.—Recently the Catholic Church has come to feel more the need of emphasizing conduct in accord with belief. But she is skeptical of any plan not rooted in

the supernatural. Frequent communion, the increased use of liturgy, and the layman's retreat are among the methods used. The development of character forming methods is seen most clearly in pedagogy. In England, Germany, and this country special methods are employed to this end.—*J. P. Hylan* (Stoneham, Mass.).

2396. **Kilpatrick, W. H.** The American elementary school. *Teach. Coll. Rec.*, 1929, 30, 513-528.—Historical background, present status, and forces molding the future of the American elementary school.—*H. H. Remmers* (Purdue).

2397. **Lane, M. R.** Visual aids in occupational information classes. *Voc. Guid. Mag.*, 1929, 7, 302-304; 329-330.—Sources are given from which views for occupational information classes may be procured. There follows a description of the character of the views in the exhibit. This exhibit consists of a basic set of 1,200 views representing the industries of the first three Census Divisions of Occupations. These same views in slides are also obtainable, as well as stereoptican "journeys." The article concludes with a brief description of the information portrayed by these views.—*H. S. Clapp* (Valhalla, N. Y.).

2398. **Lauer, A. R.** Some aspects to be considered in the organization of a first course in psychology. *Psychol. Monog.*, 1928, 39, 110-118.—A group of 108 students in Iowa State College were studied in reference to their reactions to the first course in psychology. Headings favored as helpful (prevocational or vocationally) included influences of heredity and environment, conscious processes, learning. Ontogenetic and phylogenetic development of the organism, the nervous system, physiological psychology were thought to be over-emphasized.—*E. R. Hilgard* (Yale).

2399. **Little, G.** Occupational information and counseling in a junior high school. *Voc. Guid. Mag.*, 1929, 7, 308-311; 316.—The junior high school pupil is in special need of vocational guidance, since he has reached the period when it is necessary for him to decide whether to continue with his education or to enter the working world. The exploratory courses of the junior high school as well as the related information of school subjects are of assistance in a counseling program. In addition, the extra-curricular activities and vocational talks by outside speakers are valuable. However, all these factors should be considered as supplementary to a well-defined course in occupational information. Some of the Detroit junior high schools are experimenting with such a course. One 60-minute period a week is devoted to these classes in the 7B, 7A, 8A, and 9A grades. The 7th grade pupils are given orientation courses to acquaint them with the aims of the junior high school. The last part of the term is devoted to giving the pupils a general view of the occupational groups and in showing them the relation of these groups to the three curricula of the junior high

school. Local occupations are studied intensively in the 8th grade, while the pupils of the 9th grade are aided in finding the type of work for which they are best fitted.—*H. S. Clapp* (Valhalla, N. Y.).

2400. **Margold, C. W.** The underlying theories of character education of some radical writers. *Rel. Educ.*, 1929, 24, 122-123.—Many radical writers would forego character education in preference to natural individual expression.—*J. P. Hylan* (Stoneham, Mass.).

2401. **McEntire, A. T.** Do high school girls know the Bible? *Rel. Educ.*, 1929, 24, 165-170.—This question is concerned with the success of some 40 high school girls who enrolled for a three-year course in consecutive Bible history. The plan was to introduce a series of outstanding personalities in Bible history, who contributed to an ascending civilization, graphically represented by a series of ascending steps. Also, other persons, whose low ideals retarded civilization, were represented by descending steps. It was pointed out that the ascending personalities are woven into hero stories, while the descending characters are woven into baneful stories showing the effects of being unfaithful to Jehovah. The results from this method show there was gained a comprehensive knowledge of Bible history with its relation to its prominent characters.—*J. P. Hylan* (Stoneham, Mass.).

2402. **Moon, G. R.** The reliability of rating schemes. *School & Soc.*, 1929, 29, 366-368.—Each University of Chicago freshman for a given year was rated by at least one of his high-school teachers on the following traits: scholastic ability, attitude toward school work, purposefulness, leadership, and social adaptability. It was discovered that the degree of the scholastic success of these students in their first year in college tended to be directly related to the degree of their possession of the traits listed, with the exception of social adaptability. A comparative study of the personality ratings of 25 superior and 25 failing students, as well as of 25 who were refused admission to the University, showed that: (1) few very low ratings were given any of the students; and (2) the ratings of the various scholastic groups overlapped somewhat. It is concluded that one knowing the limitations of the ratings would find in them supplementary information valuable in judging applicants for college.—*H. L. Koch* (Texas).

2403. **Morrison, A. W.** A further discussion of college mental hygiene. *Ment. Hygiene*, 1928, 12, 48-54.—Mental hygiene in a college attempts to aid the students in straightening out their personal and emotional difficulties, thus fitting them better to cope with life after graduation.—*G. J. Rich* (Bellevue Hospital).

2404. **Moulton, E. L.** Dormitory values for students. *School & Soc.*, 1929, 29, 362-363.—Among the women students of North State Teachers' College of South Dakota it was discovered that those

working for room and board in private homes averaged 1.81 credit hours of just passing and failing grades; those doing light housekeeping, 1.74 such hours; and those living in dormitories, only 1.33. Hence, dormitory residence is recommended.—*H. L. Koch* (Texas).

2405. **Myers, G. C.** Schoolroom hazards to the mental health of children. *Ment. Hygiene*, 1928, 12, 18-24.—The development of psychological and educational tests has placed an undue emphasis upon speed in all school work. This condition places the children under stress which is distinctly unfavorable to their mental health, stress which is accentuated both by the presence of a competitive spirit and by the reactions of the teacher to the demands of her supervisors. The solution is to be found in so arranging the situation in the school that the children shall have comfortable conditions for learning.—*G. J. Rich* (Bellevue Hospital).

2406. **Nichols, M. L.** The high school student and scientific method. *J. Educ. Psychol.*, 1929, 20, 196-204.—A number of experimental situations are arranged to test the ability of high school girls to observe, compare, and draw conclusions. The effect of training in scientific method is studied. Some subjects are not amenable to training, but with regard to the remainder "it appears worth while for them to take as many courses in science as possible, provided that the courses emphasize scientific method and attitude and are not principally concerned with transmitting information."—*J. A. McGeoch* (Arkansas).

2407. **Odell, C. W.** A selected annotated bibliography dealing with examinations and school marks. Urbana, Ill.: Univ. of Ill., 1929. (*Educ. Res. Bull.* No. 43.) Pp. 42. \$0.50.—300 titles concerning examinations and marks are selected for classroom teachers, research workers, and others from the literature of the last twenty years.—*L. W. Gellermann* (Clark).

2408. **Orleans, J. S.** Report of the fifth annual nation-wide testing survey conducted through the use of the Public School Achievement Tests. Bloomington, Ill.: Pub. School Publ. Co., 1929. Pp. 16.—Over 625,000 pupils were enrolled in this survey, and the scores of over 200,000 are reported in this bulletin. Nation-wide medians and percentiles are given for each test as well as the per cents, which the nation-wide medians are of the maximum possible score, sectional medians, and medians for rural, town, and city schools. "When the scores of all sections are combined, and especially when over 100,000 scores are involved, then one gets the advance by growth of the minds so uniformly that it hardly seems but that the influence of good instruction has been balanced by the lack of influence of poor instruction, so that what is left is the native ability of the child's mind as it works in each subject." The medians for rural, town and city schools show that while the difference between the

population groups may vary, "the general run through the grades, especially from the fourth grade and above, shows very little difference in the standards attained, so long as the number of pupils is practically the same. In reading and language there is a bigger difference in favor of the cities, which probably is accounted for by the increased language experience of city life over country life rather than by the difference in instruction. In the country, however, the difference in favor of their schools appears in nature study, where the opportunity of environment had more influence than instruction." Diagnostic work and retest with Form 2 of the battery is suggested.—*L. M. Harden* (Clark).

2409. **Orton, S. T.** The "sight reading" method of teaching reading, as a source of reading disability. *J. Educ. Psychol.*, 1929, 20, 135-143.—A discussion of the physiological processes involved in reading, with the development of a physiological theory of reading disability in terms of the failure of elision of non-dominant engrams. Facts indicate that word-blindness and slow acquisition of reading form parts of a graded series. While "sight reading" may give greater progress in terms of a group average, it may also be a serious obstacle "to educable children who happen to deviate from the average in the case of establishment of a clear-cut unilateral brain habit." For these, specific teaching methods are needed.—*J. A. McGeoch* (Arkansas).

2410. **Parker, W. E., & Moyer, D. H.** Vocational information, a bibliography for college and high school students. Ann Arbor, Mich.: Univ. Mich. Press, 1928. Pp. 236. \$0.50.—Vocational guidance is coming to be vocational information. For this reason, a bibliography of 1,700 titles has been compiled and classified under the heading of ninety-odd occupations which offer opportunities especially for college graduates but which may also be of value for high school pupils. Two types of references are included: those discussing the possibilities of a vocation as a life career and those explaining the work itself. Critical annotations are given with respect to the reliability of the source and the most valuable factors in making a choice of a career. The library numbers in the University of Michigan General Library and in the Library of Congress are given whenever possible.—*M. B. Mitchell* (Radeliffe).

2411. **Pearson, D.** An experiment with automatization of the 1,000 commonest words in type-writing. *Research Studies in Commercial Education, II*, collected by *E. G. Blackstone*. Univ. Iowa Monog.: *Monog. Educ.*, 1928, First Series, No. 8, 84-97.—The relative effectiveness of teaching type-writing by beginning with meaningless letter symbols and proceeding to words, phrases and sentences, and of beginning with complete meaningful material based on the thousand commonest words from the Ayres list, was tested. One class used the Miller-Dictaphone textbook with meaningless symbols, the other class the "automatization" method. Neither method proved markedly superior to the

other, but both classes reached scores 63% higher than those ordinarily made by classes taught by traditional methods.—*B. Wellman* (Iowa).

2412. **Pintner, R., Rinsland, H. D., & Zubin, J.** The evaluation of self-administering spelling tests. *J. Educ. Psychol.*, 1929, 20, 107-111.—Two self-administering spelling tests are compared: (1) Alpha, in which the subject is to recognize the wrongly spelled word in a series of five; and (2) Beta, in which the correct spelling and four misspellings of a word are given at the end of a completion sentence requiring this word for the correct completion. The Morrison-McCall Spelling Scale is used as the criterion. Populations of 80 and 68 sixth-grade pupils are employed. Both tests have fairly high reliability and validity. Beta is superior in correlation with the criterion and in the size of the P.E. of an individual score. Beta also has a considerably higher coefficient of association with the criterion. It is believed to be a reliable test for the recognition of correct spelling.—*J. A. McGeoch* (Arkansas).

2413. **Richmond, W.** The psychiatrist in the college. *J. Amer. Asso. Univ. Women*, 1929, 22, 134-137.—This discussion is based on articles published in *Mental Hygiene* dealing with the psychiatrist, answers to a questionnaire sent to 13 colleges, and the author's own experience as a mental hygienist. The work of the psychiatrist in the college as revealed in the questionnaire is briefly summarized, and the objective of the psychiatrist defined as follows: "Not only must the individual student be helped and the faculty educated, but courses in mental hygiene should have a place in the curriculum, so that all students may have an opportunity to learn how to handle their own problems, and gain a better understanding of human behavior in general."—*J. C. Spence* (Clark).

2414. **Schutte, T. H.** Students' estimates of their ability and achievement. *J. Genet. Psychol.*, 1928, 35, 627-629.—Students on the lower levels of intelligence (on Otis test) tend to overestimate their class merits, while those on the higher levels tend to underestimate them. The higher the intelligence level the closer a student's judgment of her class merit approximates the teacher's.—*J. F. Dashiell* (North Carolina).

2415. **Smallwood-Soutter, H.** An analysis of the shorthand errors made by one hundred fifty beginning pupils as revealed through two types of tests. *Research Studies in Commercial Education*, III, collected by *E. G. Blackstone*. *Univ. Iowa Monog.: Monog. Educ.*, 1928, First Series, No. 9, 81-93.—An analysis of the shorthand errors of 150 high school pupils on tests involving answers to questions on the content of silent reading shorthand material and tests of verbatim transcription of shorthand material. Pupils made similar errors whether in answering questions based on thoughts in a selection or in making the verbatim transcrip-

tion. They were almost as likely to omit words as to guess.—*B. Wellman* (Iowa).

2416. **Smith, F. O.** The determination of a general factor in research ability of college students. *Psychol. Monog.*, 1928, 39, 119-125.—90 men students were rated by their classmates upon the 11 traits of the Iowa rating scale of research abilities. Eliminating health, which alone correlated negligibly with the other traits, the mean of intercorrelations is .53, S.D. .102. The tetrad equation applied to these coefficients gave a distribution of tetrad differences which, while not fulfilling the theoretical requirements for mean F and its S.D., nevertheless suggests a general factor underlying the special abilities which are assumed to constitute capacity for research.—*E. R. Hilgard* (Yale).

2417. **Smith, S. K.** Psychiatry and university men. *Ment. Hygiene*, 1928, 12, 38-47.—Experience at the University of California has shown that the work of mental hygiene can be profitably associated with the student health service. A great number of patients come voluntarily. A large percentage of the patients in a university psychiatric service consists of relatively simple maladjustment problems. Sex problems, psychoneuroses and psychoses are met with in the order mentioned. There is a greater amount of mental difficulty among students with limited contacts. Recommendations as to the needs of a university mental hygiene program are formulated.—*G. J. Rich* (Bellevue Hospital).

2418. **Snedden, D.** Child-centered schools. *Teach. Coll. Rec.*, 1929, 30, 542-561.—A critical analysis of the book *The Child-Centered School* by Ruggs and Shumaker.—*H. H. Remmers* (Purdue).

2419. **Sturtevant, S. M., & Strang, R.** Activities of high school girls. *Teach. Coll. Rec.*, 1929, 30, 562-571.—An analysis of daily schedules of 152 pupils from groups of girls in different economic, social, and geographical situations. Intercomparisons of an unselected group, a superior group, and of data from studies of college women are made.—*H. H. Remmers* (Purdue).

2420. **Sweet, W. W.** Character education in early evangelical movements. *Rel. Educ.*, 1929, 24, 41-48.—In the various revivals of the eighteenth century, but little emphasis was placed on character development. In New England, revivals were followed by young people's societies which had this in view, and they resulted in the formation of many philanthropic and educational institutions, especially in the middle Atlantic states. In general, moral conditions were visibly improved.—*J. P. Hylan* (Stonham, Mass.).

2421. **Tallman, R. W.** Successful teaching. *Psychol. Monog.*, 1928, 39, 106-109.—Successful teachers are not those who present subject matter in such a way that it can be reproduced on examination, but are those who cause the student to use the information in after life.—*C. W. Bray* (Princeton).

2422. Teeter, V. A. Vocational guidance through the study of occupations. *Voc. Guid. Mag.*, 1929, 7, 305-307; 326.—One of the first steps in vocational guidance is to give the pupils a knowledge of a wide range of occupations. Pupils of mediocre ability should be steered away from the "white collar" jobs. The next step is to have the pupil study intensively a few occupations in which he is especially interested. A self-inventory questionnaire comprising 20 questions relating to health, character and ability is given in full. The author uses this to acquaint the pupil with his own capacities and limitations. Finally, the pupil should study a few occupations with a view to finding the one for which he is best suited. It is the author's opinion that the teaching of occupations seems to be the way in which vocational information may best be imparted. The article concludes with an outline of the occupational civics course of the high school in Tulsa, Oklahoma.—H. S. Clapp (Valhalla, N. Y.).

2423. Tinker, M. A. Photographic measures of reading ability. *J. Educ. Psychol.*, 1929, 20, 184-191.—Photographic measures of reading performance were investigated to determine their relative validity and the influence of variation in reading material upon their consistency. Intercorrelations show that (1) perception time is the most valid photographic measure of speed of reading; (2) in reading easy narrative, pause frequency is a very good measure, pause duration a good measure, and regression frequency a fair measure; (3) in reading scientific prose (study attitude), pause frequency is very good, regression frequency is fair, and pause duration is poor; (4) there is a correlation of about 0.46 between easy narrative and scientific prose; and (5) the greater the change in reading attitude the less the correlation between reading performance in different situations. Other correlations are given.—J. A. McGeoch (Arkansas).

2424. Trowbridge, C. R. Spelling by rule. *J. Educ. Psychol.*, 1929, 20, 205-211.—A spelling test consisting of 50 words, carefully selected to illustrate eleven fixed and simple principles, was given to large numbers of high school pupils. A striking failure to apply general principles in spelling was demonstrated. In a group of 279 seniors, 270 failed to apply simple principles; the number of their errors ranged from 1 to 15. It was found, however, that the rules could be taught, with a resulting increase in correctness of spelling. Increasing maturity was correlated with increasing power to apply the rules.—J. A. McGeoch (Arkansas).

2425. Tuttle, H. S. Testing the curriculum in its natural setting. *Rel. Educ.*, 1929, 24, 173-175.—Direct ethical instruction was found to have value in correcting the tendency to cheat.—J. P. Hylan (Stoneham, Mass.).

2426. Wade, N. A. A comparison of the time spent by first-year students and expected by teachers in a state normal school. *J. Educ. Res.*, 1929, 19, 183-187.—Records of study were kept for 6

weeks by 80 first-year students in the Maryland State Normal School. The results show that the students were spending less than the time expected in preparation and that the total time demanded of the student for study, recitation, assembly and extra-curricular activities was less than the typical 44-hour business week.—S. W. Fernberger (Pennsylvania).

2427. Washburne, C., & Morphett, M. V. A simple technique for determining whether children know the meaning of spelling words. *J. Educ. Res.*, 1929, 19, 196-200.—The obvious method of determining whether or not a child knows the meaning of a given word is to have him check a list. Two lists of 37 words each were given by seven Winnetka fifth-grade teachers. In the first list the children were asked to check the words known and in the second list to check the words unknown. Both procedures seem to be reliable. Then a number of words were chosen which were almost sure to be unfamiliar to the children. This was in the form of a multiple choice test, and was given to 452 children. As high as 15% of the words were reported as known but incorrectly checked in the multiple choice test.—S. W. Fernberger (Pennsylvania).

2428. Witty, P. A., & Nelson, H. H. The ungraded room in Kansas. *Ment. Hygiene*, 1928, 12, 72-76.—The results of a questionnaire show the essential statistics concerning the ungraded classes of this state, their pupils and their teachers.—G. J. Rich (Bellevue Hospital).

[See also abstracts 2295, 2299, 2302, 2305, 2308, 2315, 2330, 2333, 2336, 2337, 2340, 2346, 2362, 2437, 2441, 2445, 2450.]

BIOMETRY AND STATISTICS

2429. Holzinger, K. J. On tetrad differences with overlapping variables. *J. Educ. Psychol.*, 1929, 20, 91-97.—The writer attempts to show that the evidence in Kelley's *Crossroads in the Mind of Man* does not discredit the Spearman two-factor theory, but rather that Kelley's best data support the Spearman theory. Using certain of Kelley's intercorrelations, Holzinger has computed 210 tetrad differences and has analyzed their significance. For the variables on which it is significant to use the tetrad criterion it works, and the two-factor theory is supported.—J. A. McGeoch (Arkansas).

2430. Kelly, E. L. The relationship between the techniques of partial correlation and path coefficients. *J. Educ. Psychol.*, 1929, 20, 119-124.—The similarity between the method for finding the regression equation coefficients in Garrett's modification of the Tolley and Ezekiel method of handling multiple correlation problems and the equations involved in the techniques of path coefficients and coefficients of determination is described. In the light of this, methods are given which take account of the similarity and which reduce the labor of finding the multiple coefficients.—J. A. McGeoch (Arkansas).

2431. Lindquist, E. F., & Foster, R. B. On the determination of reliability in comparing the final mean-scores of matched groups. *J. Educ. Psychol.*, 1929, 20, 102-106.—It is pointed out that the use of the customary formula for the standard error of the difference between uncorrelated measures is unjustified when one is studying the amounts of progress of two initially equated groups. It takes no account of sampling errors in the initial mean scores, and it does not allow for the correlation which nearly always exists between successive measures of the same groups. A formula is developed which includes these two factors, thus giving a defensible measure of the difference between the observed gains of groups. The conditions under which the usual formula, and the new one, may be used are discussed.—J. A. McGeoch (Arkansas).

2432. Spearman, C. The uniqueness of "G." *J. Educ. Psychol.*, 1929, 20, 212-216.—A reply to E. B. Wilson's argument that "g" cannot be regarded as unique, and to the further inference that its indeterminateness is essential and final. Spearman reiterates the basic equations for the obtaining of a determinate value and deals critically with certain inferences from Wilson's discussion of the transformation of correlations.—J. A. McGeoch (Arkansas).

2433. Wilson, E. B. Comment on Professor Spearman's note. *J. Educ. Psychol.*, 1929, 20, 217-223.—Wilson comments particularly on the problem of overlapping involved in the transformation theory, on Spearman's equation for the determination of "g," and on the psychological assumptions involved.—J. A. McGeoch (Arkansas).

2434. Wilson, E. B., & Hilferty, M. M. Note on C. S. Peirce's experimental discussion of the law of errors. *Proc. Nat. Acad. Sci.*, 1929, 15, 120-125.—Grave danger may be involved in assuming, without experimental verification, that the normal curve is a satisfactory description of the incidence of empirical errors of observation. This danger is forcibly illustrated by data from an extensive experiment, done in 1870, by C. S. Peirce. The data of Peirce consist of a total of 12,000 records (extending over 24 days), "of the time elapsed between the making of a sharp sound and the . . . reception of the sound by the observer."—H. S. Conrad (California).

[See also abstracts 2437, 2444.]

MENTAL TESTS

2435. Dearborn, W. F., & Smith, C. W. The results of rescoring five hundred thirty Dearborn tests. *J. Educ. Psychol.*, 1929, 20, 177-183.—A rescoring of 409 Dearborn A and 121 Dearborn C intelligence tests shows that (1) many errors in scoring were present; (2) there was enough constant error to affect the entire group, and to make conclusions based upon individual M.A.'s computed from un-

checked scores open to doubt; (3) there was persistent underscoring; (4) nearly as many errors were found in tests scored objectively as in those scored subjectively; and (5) frequent and careful instruction of scorers and a check, preferably by a second person, are essential to accuracy.—J. A. McGeoch (Arkansas).

2436. Darcus, M. D. Analysis of specific responses of children in the Healy pictorial completion test II. *J. Genet. Psychol.*, 1928, 35, 574-586.—Scores on this test by 102 children between ages of 6 and 10 inclusive showed much overlapping between different age groups but increase of median scores for each higher age. Annual retests also show increase of median scores. Analysis of specific responses made shows that with age there goes increased perception of relations not only within each particular picture but also between successive pictures.—J. F. Dashiell (North Carolina).

2437. Douglass, H. R., & Huffaker, C. L. Correlation between intelligence quotient and accomplishment quotient. *J. Appl. Psychol.*, 1929, 13, 76-80.—Wilson has attempted to explain the significantly negative correlation coefficient between IQ and AQ on the basis of errors of measurement. But he has overlooked the fact that errors of measurement do not operate to produce negative coefficients, but rather zero correlations. If we would further follow Wilson, and use the regression line of IQ on EQ (the reverse of his procedure), the opposite conclusion would be reached. It is algebraically shown that, due to the unique nature of the coefficient between a variable and a ratio of which the first variable is the denominator ($r_{x(z/s)}$), it can vary only between 0 and -1.00. In the special case where IQ and EQ are perfectly correlated and each is measured by perfect instruments the coefficient becomes zero. Chance errors not normally distributed may, in some cases, produce slight positive correlations.—W. L. Valentine (Ohio State).

2438. Farnsworth, P. R. Concerning so-called group effects. *J. Genet. Psychol.*, 1928, 35, 587-594.—Students were paired into two groups on the basis of scores on the Thorndike test; and the students were given four other standard intelligence tests twice, once alone and once in the class room—the order being varied for the two groups. No consistent group effect on mean scores was evident. There was a slight tendency to higher scores on more difficult items when individuals were working alone.—J. F. Dashiell (North Carolina).

2439. Foran, T. G., Lillis, G. A., & O'Leary, C. E. A study of trait variability. *Cath. Univ. Amer., Educ. Res. Bull.*, 1928, 3, No. 6.—Critiquing the interpretation of general intelligence test scores, the author stresses the analytical study of the psychological processes involved in each test. Hull's study of trait differences is reviewed along with Thorndike's and Spearman's theories. Hollingworth's theory is criticized. The study reported is based upon the Otis Group Intelligence Scale (advanced examina-

tion). The Terman Group Test of Mental Ability, the Miller Mental Ability Test and the Dearborn Group Tests of Intelligence, Series II, Revised Edition. The scores of the thirty exercises contained in these four tests are transmuted into comparative scores for comparison and correlation. The mean of the transmuted scores for each pupil represents "the average ability of the student." "The standard deviation of the distribution of his scores is a measure of his trait variability." This index is referred to as the "trait standard deviation" to distinguish it from the standard deviation of the scores of the group. The author finds that "marked degrees of unevenness of ability are characteristic of the organization of intelligence." "Individuals differ in regard to trait variability as they do in intelligence." "Distribution of trait variability conforms to the normal curve." "No relation exists between the amount of several traits and trait differences in them." "Apparently any degree of variability may be associated with any degree of general intelligence." "The facts revealed are in harmony with Spearman's theory of intelligence."—*R. A. Brotemarkle (Pennsylvania)*.

2440. Goodenough, F. L. The relation of the intelligence of pre-school children to the occupation of their fathers. *Amer. J. Psychol.*, 1928, 40, 284-302.—380 children, 2, 3, and 4 years old, were given the Kuhlman Revision of the Binet tests twice, the two examinations being separated by an average interval of six weeks. The parents were divided into six occupational categories ranging from professional to unskilled labor. Results show a steady decrease in the average IQ of the children as we go down the scale of paternal occupations, but this tendency is distinctly more marked in the results of the second examination than in the first. These findings were compared with three other studies: the Barr Scale values using the frequencies reported for the city of Minneapolis, the distribution of Alpha scores for the white draft, and Haggerty and Nash's studies of New York state schools. In separate curves representing each successive occupational group, each group is lower in the scale than the group preceding it.—*R. Stone (Clark)*.

2441. Hartson, L. D. Intelligence and scholarship of occupational groups. *Person. J.*, 1928, 7, 281-285.—The relative intelligence, scholarship and achievement of college graduates in several occupations was computed on the basis of three sources of data: the 1926 directory of occupations of the Oberlin College alumni; psychological tests given to seniors and freshmen since 1919; and the scholastic grades of members of classes 1920 to 1926 inclusive. In intelligence, the group of women in the college teaching profession shows a marked superiority, while those in the art and physical education groups show the lowest test scores. In scholarship, the college teaching group again ranks first, with the business men and physical education group at the bottom of the list. In achievement, the physical education group stands high, and the

journalistic and business men groups low. But it is pointed out that the duller student is almost certain to have the higher achievement quotient. The only generalization made in this study in reference to the relationship between intelligence test scores and scholastic marks is: as a rule, the men make a better showing in intelligence test than in scholastic grades, whereas the women make a relatively higher scholastic record than one would predict from their test scores.—(Courtesy *Person. J.*)

2442. Heidebreder, E. F. Problem solving in children and adults. *J. Genet. Psychol.*, 1928, 35, 522-545.—Subjects of different ages (3-year-olds, 4-year-olds, 6- to 10-year-olds, and adults) were placed in problematic situations as much alike objectively as possible (alternative boxes from which choice was to be made). Data obtained included: errors, reaction time, verbal responses, sequences of reactions, and observer's notes on the subject's general behavior. It was found that: (1) ability to solve problems increased with age; (2) the problem-solving attitude appeared more frequently with age, in association with self-regarding attitudes; (3) there was a gradual emergence with age of general form or mode of procedure; (4) age differences appeared in the frequency and in the adaptiveness of reasons verbally offered by subjects; (5) a gradual change occurred with age from more subjective to more objective attitudes.—*J. F. Dashiell (North Carolina)*.

2443. Kent, G. H., & Shakow, D. Group tests for clinical studies. *J. Genet. Psychol.*, 1928, 35, 595-618.—A group test battery of seven units was used with 200 industrial school boys. Two of the sub-tests having previously been standardized, the other five were arbitrarily corrected to the same levels. The tests were printed in a form intelligible to a child of eight-year level, and administered without time limits. Results obtained were much more constant than those obtained by any other method; but the system is only tentative and deserves revision and extension. It is especially suitable for institutional use, and can be standardized and adapted to the particular institution's need.—*J. F. Dashiell (North Carolina)*.

2444. Kuhlman, F. The Pearson formula, and a further note on the Kuhlman-Anderson tests. *J. Appl. Psychol.*, 1929, 13, 32-45.—One fault of the Pearsonian r is that "two measures on a given case will affect r in proportion as the measures are above and below averages, rather than in proportion to the amount of agreement between them." Or, whenever a case measures below average in one series and above in the other (so that $d_1 d_2$ is negative), r is decreased, "although actual agreement . . . may be close." Detroit Alpha group and K-A tests were given to 136 pupils in grade V. Certain of the test results were then eliminated and the Pearsonian r computed between the M.A.'s in months as given by the two tests for 5 different groups of the original 136. The r 's were, for O, 0.794; for A, 0.682; for B, 0.912; for C, 0.803; and for D, 0.866. Meas-

uring the agreement between groups by the actual average difference in M.A.'s as given by the two tests, A gives better agreement than O, although the r 's for the two groups indicate the reverse. Only in D does r change to agree with the real difference. One may also determine a more refined difference between groups by means of a formula given and obtain the per cent. of disagreement. Again the condition above showing the greatest disagreement (B) exhibits the highest r . K-A tests have been previously correlated with 7 others. In studying these results in the same way it is shown that no comparison can be made from r as to the relative amounts of correlation between the tests or as to changes in this correlation from grade to grade. For all tests except K-A the agreement between the two halves becomes strikingly better for the higher grades. But instead of assuming that the tests work better at the higher levels, it is more in accord with other considerations to note that when the same tests are applied to the higher levels they become easier and release more uniform mental processes from item to item and from child to child. No tests can give uniform results at various levels. Tests of apparently wide range will show high reliability and validity as measured by r ; and the higher the r the poorer the tests in the traits under consideration.—W. L. Valentine (Ohio State).

2445. Lowe, M. L., & Crawford, C. C. First impression versus second thought in true-false tests. *J. Educ. Psychol.*, 1929, 20, 192-195.—An analysis of changes of answers in true-false test responses, under ordinary circumstances and under instruction to record both first impression and second thought, shows that correct changes are more frequent than incorrect changes. This performance is not found with a few individuals or with a few questions only.—J. A. McGeoch (Arkansas).

2446. Mathews, C. O. The effect of the order of printed response words on an interest questionnaire. *J. Educ. Psychol.*, 1929, 20, 128-134.—The problem was to find to what extent answers on a rating blank with five possible responses will be influenced by the order in which the descriptive words were printed. The influence of position was from .1 to 7.2%. Position one (farthest to the left) was influential over position two and position four was more potent than position five.—J. A. McGeoch (Arkansas).

2447. Rosanoff, A. J. [Ed.] Free association test. (Kent-Rosanoff.) Repr. from *Manual of Psychiatry*. New York: Wiley, 1929. Pp. 546-620. \$1.50.—Similar, though containing less material, to "A study of association in insanity," 1910, by Kent and Rosanoff. Major divisions include sections on the mechanics of administration of the test; classifications of reactions; tables of results and standards obtained by means of the Kent-Rosanoff test; the frequency tables and the appendix to them. There is added a list of juvenile reactions, the findings of Woodrow and Lowell (1916).—L. M. Hatfield (Illinois).

2448. Schultz, R. S. A mental alertness examination for the working age level. *J. Appl. Psychol.*, 1929, 13, 46-61.—The Viteles Mental Alertness Examination (T-100) was given to 392 pupils. Sixth- to eighth-grade public school children comprised 293 of the cases, and the remaining 99 were from a trade school for girls (median age 16-7). T-100 correlates with Otis Intermediate as a criterion to the extent of $r = 0.796 \pm 0.0153$ for 267 cases. Local city examinations and T-100 correlate 0.907 ± 0.0140 ($N = 72$); and city and Otis correlate 0.715 ± 0.0383 ($N = 82$). The reliability (odd vs. even) is $r = 0.907 \pm 0.0069$ for 293 cases and increases with higher grade. The total group contained 115 Italian and 118 Jewish children. The test differentiates reliably between the two groups in favor of the Jews. Neither age nor sex is a significant factor in performance; but for grade and performance $r = 0.575 \pm 0.0273$. The trade school girls, older and with more schooling, score higher than public school girls. The self-administering feature of T-100 makes it desirable in vocational guidance and employment office procedure.—W. L. Valentine (Ohio State).

2449. Scudder, K. J. The predictive value of general intelligence tests in the selection of junior accountants and bookkeepers. *J. Appl. Psychol.*, 1929, 13, 1-18.—The median Terman test score of 264 disabled veterans who were trained as accountants and bookkeepers was 129. The 170 who finished training scored 142 and the 94 who discontinued, 112. Both of these groups were equally disabled. After between 3 and 4 years a follow-up questionnaire (103 replies) to the 170 rehabilitated men showed that 85 were still employed in the training objective, 11 unemployed because of disability, and 7 had failed. A further study of the upper, middle, and lower ten showed that, other factors constant, those making scores of 140 or above are almost sure to be rehabilitated for bookkeeping, but the lower 10 almost a total loss, only 2 being successful in the training objective. "A Terman group test score of 100 for bookkeepers and 125 for junior accountants is, in most cases, essential to success. In a measure, arithmetical ability (Woody-McCall test) will compensate somewhat for a low Terman score."—W. L. Valentine (Ohio State).

2450. Stoddard, G. D. Iowa placement examinations. A new departure in mental measurements. *Psychol. Monog.*, 1928, 39, 92-101.—A review describing the origin of the Iowa Placement Examinations and their value in solving practical problems of college administration.—C. W. Bray (Princeton).

2451. Stoy, E. G. Tests for mechanical drawing aptitude. *Person. J.*, 1928, 7, 93-101.—A series of tests was given in two high schools to groups of students differentiated on the basis of promise or lack of promise in mechanical drawing. The criterion of promise was the judgment of the teachers supplemented by a practical mechanical drawing test. Use was made of 13 separate aptitude tests, concerned with spatial relations, motility, and mechan-

ical ingenuity. Six of these revealed significant group differences between promising and unpromising students: Thurstone-Jones Problem 4 (paper folding), Minnesota Paper Form Board, Downey Group Test V (coordination of impulses), Downey Group Test VIII (flexibility), Painted Cube Test, and Freeman Puzzle Box.—(Courtesy *Person. J.*)

2452. Stoy, E. G. Additional tests for mechanical drawing aptitude. *Person. J.*, 1928, 7, 361-366.—In the *Personnel Journal* for August, 1927, Stoy described an experiment in measuring mechanical drawing aptitude in which 6 out of 13 tests gave valid results. In the present similar study 15 other tests were used and the method of procedure was slightly modified. The subject were freshman students in their second semester mechanical drawing at the Lane Technical High School, Chicago. Five instructors of six classes of such students were asked to select their most promising students solely as regards mechanical drawing aptitude. As an additional criterion the Minnesota Mechanical Drawing Test A was used, and where the two criteria were in disagreement the student was omitted from the study. The promising and unpromising groups

as finally chosen consisted of 25 each. In 8 of the 15 tests the difference in means between these two groups exceeded three times the error of the difference, indicating decided validity. These tests in order of validity are Thurstone-Jones Sketching Test, MacQuarrie Blocks, MacQuarrie Tracing, MacQuarrie Pursuit, MacQuarrie Location, Brigham Series IV Test 6, Parallelogram Illusion, and MacQuarrie Copying. The tests with less validity were Circle Illusion, Wiggly Block, MacQuarrie Dotting, MacQuarrie Tapping, Thurstone-Jones Hand, Müller-Lyer Illusion, and Thurstone-Jones Gear.—(Courtesy *Person J.*)

2453. Vance, T. P. The Iowa State college reasoning test. *Psychol. Monog.*, 1928, 39, 72-77.—The reasoning test adds nothing to a modification of the Army Alpha as a means of predicting college achievement. This raises the question, "Are the schools and colleges training the young to reason?"—C. W. Bray (Princeton).

[See also abstracts 2201, 2298, 2299, 2300, 2311, 2312, 2316, 2322, 2329, 2339, 2359, 2416, 2429, 2432, 2433, 2451, 2453.]

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